

**Appendix C**

**Analytical Data Summaries Pre-Remediation  
and Post-Remediation**



Table C-1. Preremediation samples.

	41300101	41300201	41300301	41300401	41300501	41300601	41300701	41300801	41300901	41301001	41301101	41301201	41301301	41301401	41301501	41301601
	Sector 1 0–6 in.	Sector 1 1–1.25 ft	Sector 2 0–6 in.	Sector 2 1–1.25 ft	Sector 3 0–6 in.	Sector 4 0–6 in.	Sector 5 0–6 in.	Sector 5 1–1.25 ft	Sector 6 0–6 in.	Sector 6 1–1.25 ft	Sector 7 0–6 in.	Sector 8 0–6 in.	Sector 9 0–6 in.	Sector 10 0–6 in.	Sector 10 0–6 in.	
Soil Sample Analysis																QC Rinsate
TCCLP Metals (mg/L)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Arsenic	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Barium	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cadmium	0.028	—	0.018	—	—	—	4.19	—	0.015	—	—	—	0.022	—	—	—
Chromium	0.004	—	0.003	—	—	—	0.002	—	0.002	—	—	—	0.001	—	—	—
Lead	0.444	0.001	0.317	0.002	0.008	0.036	2.81	0.126	0.936	0.002	0.016	0.036	0.178	0.003	0.001	—
Mercury	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Selenium	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Silver	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total Lead (mg/kg)	3,140	386	427	170	583	1,960	9,260	1,540	1,770	184	907	639	1,610	143	—	12.1

Table C-2. Remediation samples.

TCLP Metals (mg/L)	41312101 Sector 1	41312201 Sector 5	41312301 Sector 5
	0.5—1.0 ft	0.5—1.0 ft	1—1.5 ft
Arsenic	—	—	—
Barium	—	—	—
Cadmium	0.004	0.007	0.003
Chromium	—	—	—
Lead	0.001	0.013	0.002
Mercury	—	—	—
Selenium	—	—	—
Silver	—	—	—
Total Lead (mg/kg)	—	—	—

Table C-3. Postremediation samples.

TCLP Metals (mg/L)	41310001 Sample Point 1	41310101 Sample Point 2	41310201 Sample Point 3	41310301 Sample Point 4	41310302 Sample Point 4	41310401 Sample Point 5	41310501 Sample Point 6	41310601 Sample Point 7	41310701 Sample Point 8	4130801 Sample Point 9	41310901 Sample Point 10
Arsenic	—	—	—	—	—	—	—	—	—	—	—
Barium	—	—	—	—	—	—	—	—	—	—	—
Cadmium	—	—	—	—	—	—	—	—	—	—	—
Chromium	—	—	—	—	—	—	—	—	—	—	—
Lead	—	—	—	—	—	—	—	—	—	—	—
Mercury	—	—	—	—	—	—	—	—	—	—	—
Selenium	—	—	—	—	—	—	—	—	—	—	—
Silver	—	—	—	—	—	—	—	—	—	—	—
Total Lead (mg/kg)	298 J	12.4 R	31.1 J	18.3 J	18.5 J	66.1 J	28.9 J	53.7 J	158 J	54.2 J	34.1 J

TCLP Metals (mg/L)	41311001 Sample Point 11	41311101 Sample Point 12	41311201 Sample Point 13	41311202 Sample Point 14	41311301 Sample Point 14	41311401 Sample Point 15	41311501 Sample Point 16	41311601 Sample Point 17	41311701 Sample Point 18	41311801 Sample Point 19	41311901 Sample Point 20
Arsenic	—	—	—	—	—	—	—	—	—	—	—
Barium	—	—	—	—	—	—	—	—	—	—	—
Cadmium	—	—	—	—	—	—	—	—	—	—	—
Chromium	0.001	—	—	—	—	0.012	—	—	—	—	—
Lead	—	—	—	—	—	—	—	—	—	—	—
Mercury	0.001	—	—	—	—	—	—	—	—	—	—
Selenium	—	—	—	—	—	—	—	—	—	—	—
Silver	—	—	—	—	—	—	—	—	—	—	—
Total Lead (mg/kg)	11	14.8 R	9.7 R	10.9 R	95.3 J	37.5 J	14.1 R	16.5 J	57.7 J	17.6 J	129 J

**NOTE:**

The analytical results for the four samples and one duplicate were rejected during the method data validation process because of high bias attributed to the percent recovery of the low-level concentration standard (173%) coupled with a low bias indicated by the percent recoveries for the matrix spike and matrix spike duplicate samples (51% and 16.8%, respectively). The analytical results are 30 to 40 times less than the cleanup goal. If the low bias indicated by the matrix spike and matrix spike duplicate sample percent recoveries is accounted for, the analytical results for the samples and duplicate would still be well below the remediation goal. Therefore, the remediation objective was met regardless of the questionable data.

## **Appendix D**

### **Prefinal Inspection Letter, Limitations and Validation Report Transmittal Letter, and Closeout Letter for Final Inspection**



Some additional information is also attached to the Prefinal Inspection Letter that supports the information that was originally sent to the Agencies.





## Department of Energy

Idaho Operations Office  
850 Energy Drive  
Idaho Falls, Idaho 83401-1563

August 13, 2001

Mr. Wayne Pierre, Team Leader  
Environmental Cleanup Office  
U.S. Environmental Protection Agency  
Region X  
1200 Sixth Avenue  
Seattle, Washington 98101

Mr. Dean Nygard, Site Remediation Manager  
Waste Management and Remediation Division  
Idaho Department Environmental Quality  
1410 N. Hilton  
Boise, Idaho 83706

SUBJECT: TRANSMITTAL OF THE REVISED CFA-10 TRANSFORMER YARD  
REMEDIAL ACTION PRE FINAL INSPECTION CHECKLIST AND SUPPORTING  
DOCUMENTATION (EM-ER-01-129)

Dear Mr. Pierre & Mr. Nygard:

This letter transmits nine copies of the pre-final inspection checklist and supporting documentation for Central Facilities Area (CFA)-10 Transformer Yard remedial action. Supporting documentation includes (1) description of hazardous waste disposal contract, (2) two waste determination and disposition forms, (3) result tables of preremediation sampling, (4) memo of data upload into Environmental Restoration Information System (ERIS), (5) pre-remediation and post-remediation sampling results, (6) photographs of remedial action activities. Other documentation will be forwarded when it becomes available

If you have any questions or need for further information please contact Carol Hathaway at 208-526-4049 or myself at 208-526-4392.

Sincerely,

*Kathleen E. Hain*

Kathleen E. Hain, Manager  
Environmental Restoration

Cc/enc: K. Ivy, EPA, 1200 Sixth Avenue, Seattle, WA 98101, 3 copies  
C. Cody, IDHW DEQ, 3 copies  
A. Kluk, DOE-HQ, EM-441, 1 copy

EXTERNAL bcc DISTRIBUTION:

S. Wilkinson, MS 3940  
T. Safford, MS 4160, 1 copy  
IR, LMITCO, MS 3922, w/enc.

ID DISTRIBUTION:

K. Hain (OPE/ER), MS 1117, w/enc. (y)  
C. Hathaway (OPE/ER, MS 1117, w/enc (w)

RECORD NOTES:

1. This letter was written to submit the pre-final inspection checklist for CFA-10, OU 4-13 to the agencies.
2. C. Hathaway (EMER) wrote this letter for signature by K. Hain (EM-ER).
3. This letter closes CATS number N/A.
4. The attached correspondence has no relation to the Naval Nuclear Propulsion Program. Naval Reactors concurrence is not required.

August 7, 2001

CCN 24534

Kathleen E. Hain  
U.S. Department of Energy  
Idaho Operations Office  
850 Energy Drive, MS 1117  
Idaho Falls, ID 83401-1563

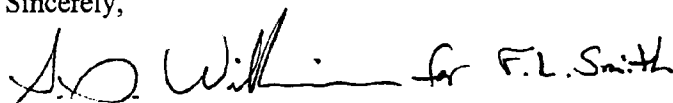
CONTRACT NO. DE-AC07-99ID13727 - TRANSMITTAL OF THE REVISED CFA-10  
TRANSFORMER YARD REMEDIAL ACTION PRE FINAL INSPECTION CHECKLIST AND  
SUPPORTING DOCUMENTATION

Dear Ms. Hain:

This letter transmits nine copies of the revised prefinal inspection checklist and supporting documentation for Central Facilities Area (CFA)-10 Transformer Yard remedial action to Carol Hathaway. Supporting documentation includes (1) description of hazardous waste disposal contract, (2) two waste determination and disposition forms, (3) result tables of preremediation sampling, (4) memo of data upload into Environmental Restoration Information System (ERIS), (5) preremediation and postremediation sampling results, (6) photographs of remedial action activities. This documentation should be forwarded to Waste Area Group 4 Project Managers at the Environmental Protection Agency and the Idaho Department of Environmental Quality.

Other documentation will be forwarded when it becomes available. If you have any questions, please contact Deborah Wagoner of my staff at 208-526-9989.

Sincerely,



F. Lee Smith, Manager of Projects  
Environmental Restoration

DWW:tf

Enclosure

cc: Carol A. Hathaway, (9), DOE-ID, MS 1117

(w/o Encl)  
R. Jeffrey Hoyles, DOE-ID, MS 1221  
Craig D. Cutler, MS 3810

Kathleen E. Hain  
August 7, 2001  
CCN 24534  
Page 2

bcc: ARDC, MS 3922

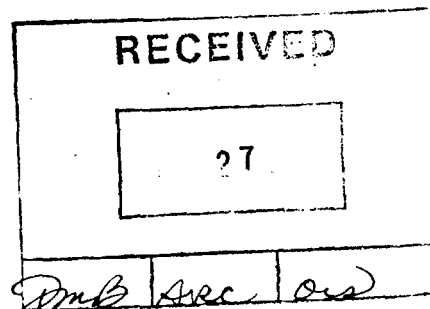
(w/o Encl)  
Christine M. Hiaring, MS 3950  
Douglas H. Preussner, MS 3950  
Deborah Wagoner, MS 3950  
Stephen G. Wilkinson, MS 3950  
Correspondence Control, MS 3601  
F. Lee Smith File, FLS-391-01

Uniform File Code: 6400

Disposition Authority: ENV1-k-1

Retention Schedule: Cutoff at project completion. Destroy 25 years after project completion. EPI

NOTE: Original disposition authority, retention schedule, and Uniform Filing Code applied by the sender may not be appropriate for all recipients. Make adjustments as needed.



**WAG 4 OU 4-13 Remedial Action**  
**Prefinal Inspection Checklist, 08/06/01**  
**Site CFA-10: Transformer Yard**

rev 8/1/01

Inspection Item	Reference	Satisfactory	Unsatisfactory	Comments
1. CFA-10 construction site cleared of fence, small lead pieces, and other debris, in accordance with the OU 4-13 RD/RA Workplan.	Work Plan Section 5.3.4			
2. Pre-remediation samples collected from potentially contaminated soils in Transformer Yard, as identified in the field sampling plan and analyzed for waste characterization.	Work Plan Section 5.3.5 Field Sampling Plan Section 3.1.1 Results of 41300101LD and 41300101TI sample delivery groups.			
3. Pre-remediation analytical data received and entered into ERIS.	Field Sampling Plan Documentation of entry into ERIS of results from 41300101LD and 41300101TI sample delivery groups.			
4. CFA-10 Transformer Yard soil excavated per the OU 4-13 RD/RA Workplan as revised in agency meetings.	Work Plan Section 5.3.5 Agency meeting minutes and agendas 5/04, 5/23, 6/07, and 6/27			
5. Dust suppression measures implemented during excavation activities.	Work Plan Section 4.2.2			
6. Excavated soil directly deposited in transport containers located within the area of contamination.	Work Plan Section 4.2.5			
7. Stopwork issued if any cultural objects are discovered during excavation	Work Plan Section 4.2.9			
8. Stopwork issued if any Native American human remains are uncovered during excavation.	Work Plan Section 4.2.10			
9. All CFA-10 soils greater than 400mg/kg. and non-hazardous soils (<5mg/L TCLP lead or <1mg/L TCLP cadmium) transported and disposed of at CFA Landfill.	Work Plan Section 5.3.5 WDDF #2954N			
10. All CFA-10 hazardous soils and miscellaneous wastes (>5mg/L TCLP lead or >1mg/L TCLP cadmium) packaged, labeled, and transported to the appropriate TSDF.	Work Plan Section 5.3.5 WDDF #2957Q			
11. Post-remediation verification samples collected from excavated Transformer Yard, and analyzed as identified in the field sampling plan.	Work Plan Section 5.3.5 Field Sampling Plan Section 3.1.3 Results of 41312101UC and 41311901LD sample delivery groups.			

**WAG 4 OU 4-13 Remedial Action**  
**Prefinal Inspection Checklist, 08/06/01**  
**Site CFA-10: Transformer Yard**

rev 8/1/01

12. Post-remediation analytical data received, validated and entered into ERIS.	Field Sampling Plan Documentation of entry into ERIS of results from 41312101UC, 41311801LD, and 41311901LD sample delivery groups.			
13. Post-remediation data transmitted to DOE-ID, Idaho DEQ, and EPA within 120 days per FFA/CO.	Field Sampling Plan Transmittal letter of result tables. FFA/CO statement 19.1			
14. CFA-10 waste complies with LDRs prior to placement in a land disposal unit.	Work Plan Sections 4.2.6 and 5.3.5 Contract Number 268.			
15. Hazardous waste determinations for all CFA-10 waste completed and approved based on validated analytical data or process knowledge, as per MCP-69.	Work Plan Section 4.2.4, Appendix D, section D.1 WDDF 2957Q and 2954N			
16. Excavation backfilled, compacted and graded to previous grade in accordance with Specification.	Work Plan Section 5.3.5 Appendix B Section 02200-Earthwork			
17. Equipment decontaminated and contaminated materials disposed of properly.	Work Plan Sections 5.3.7 and 5.10			
18. Temporary exclusion zones, work control areas, equipment decontamination areas, and TAAs removed; excess materials such as rope, wire, fence posts, etc., removed.	Work Plan Section 5.3.7			
19. As-built drawings depicting final construction.	Work Plan Section 5.8			
20. Hazardous soils disposed of properly	Signed Certificate of Destruction/Disposal			

## REFERENCES

DOE-ID, 2001, *Field Sampling Plan for the INEEL CFA, OU 4-13, Transformer Yard (CFA-10)*, DOE/ID-10857, Revision 2, June.

DOE-ID, 2001, *Remedial Design/Remedial Action Work Plan INEEL CFA, OU 4-13 Transformer Yard (CFA-10)*, DOE/ID-10826, Revision 0, April.




**Suzette M Olson**

07/31/2001 01:18 PM

.....

To: Deborah J Wagoner/WIGG/CC01/INEEL/US@INEL

cc:

Subject: Re: Onyx contract 

Onyx Contract #268 is for the commercial transportation, treatment and disposal of hazardous and/or toxic wastes regulated by RCRA, TSCA, FIFRA and CERCLA generated at the INEEL.

Deborah J Wagoner

To: Suzette M Olson/SMO/CC01/INEEL/US@INEL

cc:

Subject: Onyx contract

To: Suzette M Olson/SMO/CC01/INEEL/US@INEL, Robert T Crowton/RTC/CC01/INEEL/US@INEL

cc: Deborah J Wagoner/WIGG/CC01/INEEL/US@INEL

Subject: Onyx contract

To: Deborah J Wagoner/WIGG/CC01/INEEL/US@INEL

cc:

Subject:



# INEEL WASTE DETERMINATION & DISPOSITION FORM (WDDF)

## General Instructions:

Waste Stream Name: Clean soil/concrete debris from OU 4-13 Transformer Yard

Material Profile Number: 2954N

WDDF Number (Optional): \_\_\_\_\_

Charge #: 3XCC22T16

## Waste Stream Contacts

Contact:	Name	E-Mail	Phone	Pager	MS	Contact:	Name	E-Mail	Phone	Pager	MS
Generator:	Deborah Wiggins Wagner	wlwg	6-9889	7699	3953	Technical Specialist:	Jeffrey C. Messaros	messjc	6-4211	3313	4142
Facility Rep.:	Rhonda D. Rohe	roherd	6-1048	9171	3950	Reviewer:	Sydney Flood	floodsw	6-7194	4049	4142

**ACTION I: PROCESS KNOWLEDGE EVALUATION** (Completed by the generator with assistance from the Facility Representative)

1. Waste Generation Location: Facility: CFA Building/Room: 667 Area: \_\_\_\_\_ If applicable: Container #: \_\_\_\_\_ Type/size: \_\_\_\_\_

2. Process and Waste Description: (Attachment Included: ☐ Yes ☒ No) The waste consists of clean debris (i.e. soil, sand, gravel, concrete, wood, metal) from CERCLA activities at OU 4-13 Transformer Yard (CFA-10)

3. Were any waste minimization activities a part of this process: ☒ Yes ☐ No (If Yes, provide description or reference.) DOE/ID-10826 Remedial Design/Remedial Action Work Plan INEEL CFA, OU 4-13 Transformer Yard

4. Generation Status: ☐ Anticipated ☒ Existing ☐ Routine operations ☒ Cleanup/Stabilization Activities

5. Other generation information: \_\_\_\_\_

6. Physical Description (check all that apply): Color: various ☒ Solid ☐ Organic Liquid ☐ Aqueous Liquid ☐ Sludge ☐ Aerosol ☐ Gas Cylinder ☐ Multi-Layered

7. Sources used for process evaluation (e.g. MSDS, operational logs, procedures, analyses): analysis, historical analysis, and process knowledge

8. Waste Characteristics: Note: The waste characteristics may not be known at time of initial determination. If required for treatment or characterization, those parameters will be identified at a later date.

## Liquids

a. pH (aqueous only): <input type="checkbox"/> < 2 <input type="checkbox"/> ≥ 12.5 <input type="checkbox"/> > 2 or < 12.5	Method: <input type="checkbox"/> Exact <input type="checkbox"/> NA	Solids		All	
b. Flash Point: <input type="checkbox"/> NA	h. Asbestos: If yes, is it friable? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	i. Pyrophoric (Water Reactive) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA		n. PCBs: If Yes, provide concentrations (actual & source) in composition table. PCBs Bulk Product? (40 CFR 761.62)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	
c. Total suspended solids <1% <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	j. Free liquids: If Yes, quantify volume % <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	k. Free liquids: If Yes, quantify volume % <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA		o. Sulfide ≥ 500 mg/kg <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA p. Cyanide ≥ 250 mg/kg <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA q. Oxidizer <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA r. Treatment Residue <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	
d. Is total organic carbon <1% <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	l. RCRA Debris (>60 mm) (> 50% by visual inspection) or non-RCRA Rubble <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	m. Pyrophoric (Air Reactive) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA		s. Explosive <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA t. Radioactive <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA u. Halogens (Cl, F, Br) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	
e. Fuming Acid/Acid Gases <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	f. Pyrophoric (Air Reactive) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	g. Water Reactive <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA			

# INEEL WASTE DETERMINATION & DISPOSITION FORM (WDDF)

Waste Stream Name: Clean soil/concrete debris from OU 4-13 Transformer Yard Material Profile Number: 2954N

11. Waste Composition: (Must total 100%). Attachment Included: ☐ Yes ☒ No ☐ NA

Constituent	CAS No.	Analysis or PK	Range (If constituent is <1%, use mg/kg or mg/L, otherwise report in %)		Used as a Solvent? (Y/N)	Comments
			From	To		
Metal concentrations listed in IWTS						
100% dirt/concrete debris <i>metal ignes</i>						

12. Radioisotopes: Are radioisotopes present? ☐ Yes, if Yes, refer to attachment ☒ No, if No, include signed form 435.02

**SECTION II: PROBABLE WASTE TYPE:** (Completed by the Facility Representative and used to assign waste technical specialist and for appropriate management until final waste determination is made.)

Based on evaluation of the process and available data the waste type indicated is (check all that apply):

☐ Hazardous Only ☐ Mixed ☐ Radioactive Only ☒ Conditional Industrial ☐ Used Oil

☐ Material Exchange ☐ Lab Pack ☐ Non-conditional Industrial ☐ TSCA ☐ Other - Describe:

☐ Recyclable: ☐ Non Radioactive Lead (>99+ % Lead) ☐ Lead Batteries ☐ Silver ☐ RCRA Scrap metal ☐ Other - Describe:

Indicated Waste Codes: None

## CERTIFICATION

I certify that the information in Section I of this form and the applicable attachments are fully disclosed. A good faith effort has been put forward to acquire and verify the information, willful or deliberate omissions have not been made, and all known and suspected hazards have, to the best of my knowledge, been identified. The WGS Facility Representative, based on information provided, has assigned a probable waste type in Section II.

Deborah Wiggins Wagoner  
Generator Name  
Typed/Printed

*Deborah Wiggins Wagoner*  
Signature  
6/19/01  
Date

Rhonda D. Rohe  
WGS Facility Representative Name  
Typed/Printed

*Rhonda D. Rohe*  
WGS Facility Representative  
Signature  
6/19/01  
Date

# INEEL WASTE DETERMINATION & DISPOSITION FORM (WDFF)

2954N

SECTION III WASTE DETERMINATION AND DISPOSITION (Completed by the WGS Technical Specialist)	
<b>A. Waste Determination</b>	
1. Is this a solid waste (per 40 CFR 261.2)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (If No, attach regulatory citation)	
2. Is this a Hazardous Waste (per 40 CFR 261.3)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
3. Is waste excluded from regulation under 40 CFR 261.4? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If Yes, Regulatory citation: _____)	
4. Is waste subject to 40 CFR 268 regulations? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If Yes, is the waste a: <input type="checkbox"/> Waste Water or <input type="checkbox"/> Non Wastewater. Is there a specified method of treatment? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If Yes, list the specified method: _____)	
5. Is waste listed in Subpart D of 40 CFR 261? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If Yes, provide waste codes, regulated hazardous constituent(s), and an explanation of determination.) Attachment Included: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Codes: None	
6. Is waste characteristic per Subpart C of 40 CFR 261? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If Yes, provide waste codes, regulatory subcategory, and an explanation of determination.) Attachment Included: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Codes: None	
7. If hazardous, is the waste excluded for recycling in accordance with 40 CFR 261.2(e)(1)? <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes, regulatory Citation: N/A)	
8. Is the waste mixed or low level? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If Yes, include attachment with isotopic information.)	
9. Is waste TSCA regulated for either of the following? PCBs: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Asbestos: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
<b>B. Evaluation of Underlying Hazardous Constituents (UHCs)</b> Does the waste require evaluation in accordance with 40 CFR 268.48? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If Yes, identify UHCs.) UHCs: _____ Attachment Included: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
<b>C. Disposition and Data Gap Evaluation: (Attachment included: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No)</b>	
1. Proposed Disposition (storage, treatment, disposal pathway): CFA landfill	
2. Will this waste be treated in a <90 storage area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If Yes, attach plan.) (Mixed and Hazardous Only)	
3. Is the information provided adequate for complete waste determination, management, transportation, treatment, and disposal of waste? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, identify additional information or analysis required.	
<b>D. Verification requirements: (Attachments Included: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No)</b>	
1. Will verification be performed on this waste? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, describe the verification to be performed. visual at the point of generation	
At Initial Storage Location: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
2. What is the verification frequency? once	
Immediately Prior to Shipment: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

# INEEL WASTE DETERMINATION & DISPOSITION FORM (WDDF)

2954N

**E. Packaging and Transportation Requirements (to be completed by P&T): Complete this section only if wastes are to be transported.**

1. Is waste a DOT Regulated Hazardous Material? ☐ Yes ☒ No If Yes: DOT Primary Hazard: \_\_\_\_\_ DOT Subsidiary Hazard: \_\_\_\_\_

2. Recommended Packaging: \_\_\_\_\_

3. Probable Basic Description (PSN, Hazard Class, DOT ID #: PG): \_\_\_\_\_

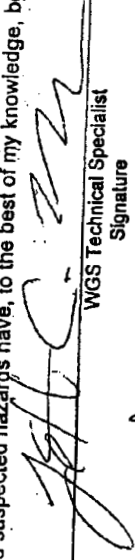
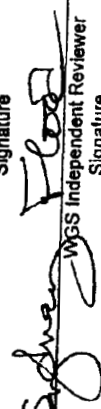
4. Other information (special shipping conditions, etc.): \_\_\_\_\_

5. If containers are already generated, are they packaged correctly for the DOT hazard class? ☐ Yes ☐ No If No, list container required: \_\_\_\_\_

Packaging & Transportation Name Typed/Printed		Packaging & Transportation Signature		Date
<b>Summary of Waste Determination:</b> <input type="checkbox"/> Hazardous (see codes listed above) <input type="checkbox"/> Mixed Low-Level (see codes listed above) <input type="checkbox"/> Low-Level <input checked="" type="checkbox"/> Conditional Industrial <input type="checkbox"/> Other (describe)				

## CERTIFICATIONS

I certify that the information in Section III of this form and the applicable attachments are fully disclosed and accurate. A good faith effort has been put forward to acquire and verify the information. Willful or deliberate omissions have not been made, and all known and suspected hazards have, to the best of my knowledge, been identified.

Jeffrey C. Messaros WGS Technical Specialist Name Typed/Printed	 WGS Technical Specialist Signature	6/19/01 Date
Sydney Flood WGS Independent Reviewer Name Typed/Printed	 WGS Independent Reviewer Signature	6/20/01 Date

Low Level Waste Hazardous Waste Determination Review Name Typed/Printed	Low Level Waste Hazardous Waste Determination Review Signature	Date
--	---	------

Additional Narrative Information (As Needed):

**Purpose:** This form provides certification that no radioactivity was added by INEEL operations to individual waste or materials and their containers that are eligible for unrestricted release off-site. This form shall be maintained by the generator of the waste for potential review by auditors.

1. Waste Name: Clean soil from 04 4-13 Transformer Yard
2. Container Identifier: \_\_\_\_\_
3. Document No.: WID#2954N AND 6/20/01

**Generator Process Knowledge Certification**

4. Did the material enter an area where it could have been contaminated with radioactivity? ☐ Yes ☒ No  
(If the answer is Yes, complete the characterization below)

Exit Date	Internal Contamination? Check One	Contaminant Likely Check all applicable ones	Likely Nuclides (Optional)
<u>  /  /  </u>	Maybe <input type="checkbox"/> No <input type="checkbox"/>	$\beta/\gamma$ <input type="checkbox"/> pure $\beta$ <input type="checkbox"/> $\alpha$ <input type="checkbox"/>	_____
<u>  /  /  </u>	Maybe <input type="checkbox"/> No <input type="checkbox"/>	$\beta/\gamma$ <input type="checkbox"/> pure $\beta$ <input type="checkbox"/> $\alpha$ <input type="checkbox"/>	_____
<u>  /  /  </u>	Maybe <input type="checkbox"/> No <input type="checkbox"/>	$\beta/\gamma$ <input type="checkbox"/> pure $\beta$ <input type="checkbox"/> $\alpha$ <input type="checkbox"/>	_____

5. Sign one of the following:

- a) Based on my knowledge of the history of this material and the information in Section 4, I certify, by process knowledge, that this material has not been exposed, as a result of DOE activities, to unconfined radioactive material or to sources of activating flux that would cause volumetric contamination.

Deborah Wagoner Deborah Wagoner 6/19/01  
Generator Name (Printed) Signature Date

- b) Based on the information in Section 4, this material may possibly be contaminated and thus needs to be certified by analysis.

Analysis concern  $\beta/\gamma$  ☐ pure  $\beta$  ☐  $\alpha$  ☐

An approved sampling analysis plan (SAP) is on file with Facility Management. (SAP # \_\_\_\_\_)

\_\_\_\_\_  
Generator Name (Printed) Signature Date

**Radioactivity Analysis Certification**

6. Materials: \_\_\_\_\_ Analysis Technique: \_\_\_\_\_

7. Use one of the following: \*

a) Virgin exact sample  $A_B$  \_\_\_\_\_  $\sigma_B$  \_\_\_\_\_  $L_d = A_B + 1.65 (\sigma_B^2 + \sigma_M^2)^{1/2}$

b) Background envelope  $E_B$  \_\_\_\_\_ Basis Document \_\_\_\_\_  $L_d = \text{the larger of } E_B \text{ or } 1.65 \sigma_M$

8. Measurement result  $A_M$  \_\_\_\_\_  $\sigma_M$  \_\_\_\_\_ Decision Level  $L_d$  \_\_\_\_\_

Mark A or B A. \_\_\_\_\_  $A_M > L_d$  B. \_\_\_\_\_  $A_M < L_d$

9. Sample has ☐ no radioactivity ☐ radioactivity added by DOE activities based on these analysis results.

\_\_\_\_\_  
Certifier Name (Printed) Signature Date

**RAYMOND T SWENSON**

06/19/2001 03:26 PM

To: Stephen G Wilkinson/WILKSG/CC01/INEEL/US@INEL  
cc:  
Subject: Authority for Disposal to CFA landfill

You have asked me about the status of the documentary authority for the disposal to the CFA Landfill of contaminated soils from the CFA-10 Transformer Yard which do not meet the RCRA criteria for being hazardous waste but in accordance with the OU 4-13 Record of Decision (July 2000) cannot be left in the site of the original excavation. My understanding is that the ROD had provided no clear differentiation between these two categories of excavated soils, and that it provided for off-site disposal at a RCRA TSD Unit.

However, the subsequent RD/RA Work Plan for the OU 4-13 Transformer Yard (March 2001) specifically provides for non-RCRA soils to be disposed of in the CFA Landfill. The Work Plan is a Primary Document under the INEEL Federal Facility Agreement and Consent Order (FFA/CO) which has been submitted to and approved by the EPA and DEQ in accordance with the FFA/CO procedure, and is therefore incorporated by reference into the FFA/CO as an authoritative document governing remedial action.

It appears that the Work Plan effected a change from the disposal plan set out in the ROD. However, that change was not fundamental in nature, since it only provides for the diversion of non-hazardous contaminated soils to an existing landfill that is authorized to accept just such waste. This change does not, therefore, rise to the level of a fundamental change to the remedy identified in the ROD, and does not therefore trigger any need for new public review and comment on the change. The change is therefore, at most, only a significant change, which would at most require that an Explanation of Significant Differences (ESD) be added to the INEEL Site administrative record, without any need for public comment, to document the decision to alter the planned remedial action.

However, an ESD is merely a document which serves the sole purpose of documenting that decision, and is primarily necessitated when there has not been any other occasion for issuing a decision document subsequent to the ROD. The RD/RA Work Plan is the full functional equivalent of an ESD, since it also documents the joint decision of the Parties to the FFA/CO to update the remedial action plan. Adding an ESD that says the same thing would be placing form over substance. The Work Plan, like the ROD, is also incorporated by reference into the FFA/CO, and as a matter of law overrides any aspect of the ROD (a) which is inconsistent with the later decision and (b) which does not require some other prerequisite before becoming effective (such as a public comment period). We can therefore rely upon the most current version of the remedial action as defined in the Work Plan as authoritative guidance on the execution of the remedial action for OU 4-13.

# WROC INDUSTRIAL CONDITIONAL WASTE STREAM EVALUATION CHECKLIST

## Distribution (Identified by WGI)

Generator: Rhonda Rebe, ERWAGH WGS Tech. Spec., ROHERD,

6-1048, Fax 6-8632

Waste ID #: 2954N

Waste Description: NOV-PCRA, NON-PCB SOIL/CONCRETE/FRUITS

FROM EXCAVATION OF OLD TRANSFORMER YARD (WAGHOU 4-13)

WGI Assigned: L.H. Shepherd

Date Received by WGI: 6/18/01

☐ MS ☐ Copy of Form 435.10#

☐ MS ☐ Copy of Form 435.10#

☒ MS ☒ Copy of Form 435.10#

☒ MS ☒ Copy of Form 435.10#

☒ MS ☒ Copy of Form 435.10#

(Generator)

NOTE: This Checklist is to be completed for each new waste stream or revised existing waste stream. WROC receives Form 435.10# and supporting documentation from generator. The following steps must be addressed and initialed by the performer under the 1<sup>st</sup> review column as they are completed. The form shall also be reviewed by another Waste Generator Interface and concurrence documented by initialing under the 2<sup>nd</sup> review column. Steps Not Applicable shall be identified as N/A.

Step	Review Criteria/Action	Remarks (Use Comment Section if additional space required)	1 <sup>st</sup> Review	Date	2 <sup>nd</sup> Review	Date
1	Assign Waste Stream I.D. unless it is an update activity (in Newship Waste Data base).		<i>RL</i>	6/20/01	<i>RF</i>	6/20/01
2	Generate specific WROC Industrial Conditional Waste Stream Evaluation Checklist.		<i>RL</i>	6/20/01	<i>RF</i>	
3	Cursory check for required signatures, completeness (all blanks addressed) NOTE: Ensure the following specific items are addressed.		<i>RL</i>	6/20/01	<i>RF</i>	
	"No" is checked for "Does material contain free liquids?"		<i>RL</i>	6/20/01	<i>RF</i>	
	"Yes" is checked for "Current Waste Minimization Plan."		<i>RL</i>	6/20/01	<i>RF</i>	
	Check charge number for validity (use "VCO" in OV).	<i>3XC C 22 T16</i>	<i>RL</i>	6/20/01	<i>RF</i>	
	If "Waste Analysis" is checked, ensure the analytical information is included for support documentation.	<i>Completed WDDF, 435.02, Field Sampling Plan for INEEL CFA, DU 4-13, Transferred Yard,</i>	<i>RL</i>	6/20/01	<i>RF</i>	
	If "Process Knowledge" is checked, ensure adequate process knowledge is included for support documentation or ensure generator has sufficient support documentation in their files.		<i>RL</i>	6/20/01	<i>RF</i>	
	If "a treated hazardous waste," review LDR Notif./Certif. & place copies in WROC-PROJ-071 file.	<i>N/A</i>	<i>RL</i>	6/20/01	<i>RF</i>	
	If "Waste Stream Specific" such as Landfarm Treatment candidate, ensure appropriate external applications are submitted to DEQ and approvals are received.	<i>N/A</i>	<i>RL</i>	6/20/01	<i>RF</i>	

Step	Review Criteria/Action	Remarks (Use Comment Section if additional space required.)	1 <sup>st</sup> Review	Date	2 <sup>nd</sup> Review	Date
	If "Conditional approvals" exist, ensure the conditions/instructions are communicated on the 435.10#Form		JHJ	6/20/01	ST	6/20/01
4	Contact generator (on OV or by telephone) and resolve discrepancies & document changes (additions/deletions) on the 435.10# Form		JHJ	6/20/01	ST	6/20/01

Comment Section (Identify Step Number.) *Placed approval note in Edit Log: "Review & approval for landfill disposal, completed WDD, Sampling and Analysis Plans, analytical results submitted & attached to file, see WROC-PR05-135 file for support documentation." JHJ 6/20/01*

**COMPLIANCE APPROVALS:** The requirements stated in the above sections of this Checklist have been reviewed for completeness and compliance by the following individuals:

*LH Shepherd* \_\_\_\_\_  
Waste Generator Interface \_\_\_\_\_  
Date 6/20/01

*Sylvia Flatt* \_\_\_\_\_  
Waste Generator Interface Independent Reviewer \_\_\_\_\_  
Date 6/20/01

Step	Review Criteria/Action	Remarks (Use Comments if additional space required.)	1 <sup>st</sup> Review	Date	2 <sup>nd</sup> Review	Date
	Document Control					
5.	The distribution of paperwork is complete. (e.g., copies of Form 435.10# sent to generators or others as identified by the WGI.)		JHJ	6/20/01		
6.	The WROC Document Control file contains all pertinent information related to the waste stream.		JHJ	6/20/01		
7.	A completed and stamped Quality Record Documentation Sheet has been placed in the WROC Document Control waste stream file.		JHJ	6/20/01		
8.	The completed checklists are retained in the appropriate waste stream file.		JHJ	6/20/01		
9.	Two (2) copies of the complete file have been submitted to Document Control for retention: 1 copy for the file, 1 copy for Archives.	See WROC-PR05-135 file for copies of support documentation	JHJ	6/20/01		



Comments (Identify step number.)

**DOCUMENT CONTROL APPROVAL:** The requirements stated in the above Document Control Section of this Checklist have been reviewed for completeness and compliance by the following individual:

  
Waste Generator Interface

6/20/01  
Date

QUALITY ASSURANCE RECORD TRANSMITTAL FORM

IDENTIFICATION INFORMATION		
1. Index File No.: <u>2954 N</u>	2. Uniform File Code (UFC): <u>8104</u>	
3. Document Number: <u>46</u>	Revision: <u>29</u>	Date: <u>1 / 1</u>
Number of Sheets: <u>75</u> <input type="checkbox"/> Single Sided <input checked="" type="checkbox"/> Double Sided		
Record(s) Description: <u>Evaluation Checklist (3 pgs); 416.04 (1 pg); Material Profile (9 pgs); WDDF (4 pgs); 435.02 (1 pg); Field Sampling Plan for the INEEL, CFA, DU 4-13, Transformer Yard (CFA-10) (29 pgs double-sided); Raymond Remondin Email note "Authority for Disposal to CFA Landfill" (1 pg); 2001 analysis results from Field Sampling Plan DOE/ID-10857, Rev 2, June 2001 (12 pgs); 1995-98 Total ITCLP results w/for cover sheets (15 pgs);</u>		
Item or activity to which the records apply: <u>See WRDC-PROJ-135 file for support documentation</u>		
<input type="checkbox"/> See attached index		
4. Submitting Organization: <u>WGS</u>	5. Point of Contact <u>Lester H. Shepherd</u>	
6. Record Medium: <input checked="" type="checkbox"/> Paper <input type="checkbox"/> Electronic <input type="checkbox"/> Microfilm <input type="checkbox"/> Audio/Visual <input type="checkbox"/> Other (Indicate): _____		
7. Record(s) pertain to Quality Level 1 items/activities: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Records pertain to Spent Nuclear Fuel: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
8. Records being dual stored: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, location of duplicate records (Bldg./Room): _____		

RECORD(S) CLASSIFICATION AND RETENTION	
9. Disposition Authority: <u>ENV6-B (Pending)</u>	
10. Retention Period: Lifetime Record(s) (Records which must be retained for the life of the item or activity.) <input type="checkbox"/> Nonpermanent Record(s) (Records required to show evidence that an activity was performed in accordance with applicable requirements, but which need not be retained for the life of the item.) Permanent Record (Records appraised by the National Archives and Records Administration (NARA) as having sufficient, historical or other value to warrant continued preservation by the Federal Government beyond the time they are needed for administrative, legal, or fiscal purposes.) Additional Retention Requirements (indicate source):	

VALIDATION		
11. The record(s) identified above have been reviewed and found to be legible, accurate, complete to the work accomplished and identifiable to the item or activity to which they apply.		
<u>Lester H. Shepherd</u> Validation Name (Print/Type)	<u>LH Shepherd</u> Validation Signature	<u>6/20/01</u> Date

TRANSMITTAL		
12. Sender: Sign and date.		
13. Receiver: Sign and date after verifying the records are legible and complete and match the provided description.		
<u>Lester H. Shepherd</u> Sender Name (Print/Type)	<u>LH Shepherd</u> Sender Signature	<u>6/20/01</u> Date
<u>D. M. Altman by L.H. Shepherd</u> Receiver Name (Print/Type)	<u>LH Shepherd</u> Receiver Signature	<u>6/20/01</u> Date
Sender Name (Print/Type)	Sender Signature	Date
Receiver Name (Print/Type)	Receiver Signature	Date
Sender Name (Print/Type)	Sender Signature	Date
Receiver Name (Print/Type)	Receiver Signature	Date



# Integrated Waste Tracking System Material and Waste Characterization Profile INFORMATION ONLY



2954N : Non-RCRA, non-rad soil, concrete, and fencing materials from OU 4-13  
transformer Yard

## Waste Stream Approval

Version 3  
APPROVED



The Material and Waste Characterization Profile characterization data meets the appropriate Site acceptance criteria (or a contracted Off-Site Vendor's acceptance criteria) for the associated material or waste type and action. A regulatory based disposition is identified for the material or waste defined by this profile. Independent review was performed and comments from the review addressed. Approval to offer this material or waste for disposition is granted.

Material Profile No.: 2954N

Date Assigned: 12-Jun-2001 10:30:30 AM

Profile Name: Non-RCRA, non-rad soil, concrete, and fencing materials from OU 4-13 transformer Yard

Site Treatment Plan ID:

Generating Location: OU4-13 : WAG 4 Operable Unit 4-13

Waste Type and Action: Industrial Waste: Conditional to be Disposed at INEEL Landfill

Approve Statement: L. H. Shepherd

Date: 20-Jun-2001 08:18 AM

- Status: ☒ Active (waste currently being generated)  
☐ Inactive (waste not currently being generated)  
☐ Cancelled (waste never generated)

*SP100  
6/20/01*

## Last Profile Update or Annual Review Approval

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Data Certification

CERTIFIED



A waste determination process for this waste stream has been performed. Characterization data was derived by approved analytical methods or process knowledge information and any data limitations have been documented. Legally and scientifically defensible data was used for characterization whenever possible. The required data provided in this Material & Waste Characterization Profile is complete and accurate based on the analytical data or process knowledge information used for characterization.

Name: Rhonda Rohe Title: Waste Technical Specialist Date: 19-Jun-2001 Org: 6760

Phone: (208) 526-1048 Mail Stop: 3940 Facsimile No.: (208) 526-8632 E-Mail ID: ROHERD

Generating Facility: WAG 4 : Waste Area Group 4 - CFA

Generating Unit: OU4-13 : WAG 4 Operable Unit 4-13

## Data Review

REVIEWED



A review of the Material and Waste Characterization Profile has shown that a waste determination was performed and that the required profile data is complete and accurate based on the analytical data or process knowledge information provided. The characterization data is sufficient to justify an approval or disapproval for the material or waste to be offered for disposition.

Name: Sydney Flood Title: Sr. Engineer/Scientist Date: 06/20/2001 Org: 3240

Phone: (208) 526-7194 Mail Stop: 4142 Facsimile No.: (208) 526-2714 E-Mail ID: FLOOSW@inel.gov



# Integrated Waste Tracking System Material and Waste Characterization Profile INFORMATION ONLY



2954N : Non-RCRA, non-rad soil, concrete, and fencing materials from OU 4-13  
transformer Yard

## General Information

1. ☒ Yes ☐ No Will material and waste characterization be fully capable of complying with applicable RRWAC subsection?

If "No", receiving organization approval and completion of the following is required:

a. INEEL-RRWAC requirement(s) not met (list each): NA

b. Receiving organization approval letter number for nonstandard material or waste: NA

Contact	Name	E-Mail ID	Phone	Pager	Mail Stop
2. Generator Contact	Deborah Wagoner	wigg@inel.gov	(208) 526-9989	7699	3950
3. Technical Contact	Rhonda Rohe	ROHERD	(208) 526-1048	9171	3940

6. Waste Generated From: Is this secondary Cleanup/Stabilization Activity: Generating Status:
- ☐ Routine Operations Cleanup/Stab. waste? Environmental Restoration ☒ One time only
- ☒ Cleanup/Stabilization Activities ☐ Yes ☒ No ☐ On-going

NOTE: Indicates whether there will be one shipment or a series of shipments

7. Generating process description: OU 4-13 Transformer Yard (CFA-10) cleanup of non-RCRA, non-PCB soil, concrete, and site fencing materials. Soil is being excavated to meet the Final Remediation Goal of 400 mg/kg for lead, as mandated by the "Final Comprehensive Record of Decision for Central Facilities Area Operable Unit 4-13". Due to the scope of this remediation project, it can be expected that this waste generation will require multiple loads to the CFA landfill. Soil, concrete, and site fencing materials will be segregated so that soil and concrete can be placed into appropriate locations within the landfill, and fencing materials will be recycled as scrap metal.

One portion of the transformer yard contains soil that is hazardous for cadmium and lead. Information regarding this area is contained in material profile 2957Q. The areas of hazardous soil are grid 5 and a small portion of grid 2 as shown in Figure 4-1 of the sampling plan for the transformer yard (June 2001). This figure is contained in the hard copy of the material profile. Non-hazardous portions of soil are grids 1, the remaining portion of 2, 3, 4, 6, 7, 8, 9, and 10.

Further information regarding the CFA-10 transformer yard can be found in several documents. They are 1) "Comprehensive Remedial Investigation/Feasibility Study for the Central Facilities Area Operable Unit 4-13 at the Idaho National Engineering and Environmental Laboratory", DOE/ID-10680, Rev. 1, July 2000, 2) "Final Comprehensive Record of Decision for Central Facilities Area Operable Unit 4-13", DOE/ID-10719, Rev. 2, July 2000, 3) "Remedial Design/Remedial Action Work Plan Idaho National Engineering and Environmental Laboratory Central Facilities Area, Operable Unit 4-13 Transformer Yard (CFA-10)", DOE/ID-10826, Rev. 0, April 2001, and 4) "Field Sampling Plan for the Idaho National Engineering and Environmental Laboratory, Central Facilities Area, Operable Unit 4-13, Transformer Yard (CFA-10)", DOE/ID-10857, Rev. 2, June 2001.

8. Physical state at 70 degrees F (solid, liquid, sludge, gel, etc.): solid
9. ☐ Yes ☒ No Does the material contain free liquids?
10. ☒ Yes ☐ No Current waste minimization plan? (INEEL Generators Only)
- Reference: INEEL P2 Plan DOE/ID-10333 (00)

11. Indicate all that apply:

- |   |  |   |  |   |
|---|--|---|--|---|
| <input checked="" type="checkbox"/> CERCLA      | <input type="checkbox"/> Etiologic Agent     | <input type="checkbox"/> Used oil                 | <input checked="" type="checkbox"/> Soil | <input type="checkbox"/> Classified material          |
| <input checked="" type="checkbox"/> Scrap Metal | <input type="checkbox"/> Nonfriable asbestos | <input type="checkbox"/> Aerosol cans             | <input type="checkbox"/> Debris - RCRA   | <input type="checkbox"/> Accountable nuclear material |
| <input type="checkbox"/> OSHA carcinogen        | <input type="checkbox"/> FIFRA               | <input type="checkbox"/> Compressed gas cylinders | <input type="checkbox"/> Spill cleanup   | <input type="checkbox"/> > 100 PPM VOCs               |
| <input type="checkbox"/> PCB >= 50 ppm          | <input type="checkbox"/> Unused material     | <input type="checkbox"/> Friable asbestos         | <input type="checkbox"/> Wastewater      | <input type="checkbox"/> Universal Waste              |



# Integrated Waste Tracking System Material and Waste Characterization Profile INFORMATION ONLY



2954N : Non-RCRA, non-rad soil, concrete, and fencing materials from OU 4-13  
transformer Yard

12. ☐ Yes ☒ No Is this DOT regulated hazardous material? If yes, identify DOT primary hazard:  
and DOT subsidiary hazard(s):
13. ☐ Yes ☒ No At the point of generation did this material contain RCRA "F", "K", "U", or "P" listed waste either in pure form, as a mixture, or as a treatment residual (i.e., ash, leachate, spill cleanup), or "D" characteristic waste? If yes, give applicable EPA:  
Source Code: \_\_\_\_\_  
Form Code: \_\_\_\_\_  
and EPA Hazardous Waste Numbers (40 CFR 261):  
and attach applicable LDR notification and certification (40 CFR 261)
14. RCRA hazardous waste determination was made by: ☐ Waste analysis, ☐ Process knowledge and/or ☒ Both
15. ☒ Yes ☐ No Is Physical Characteristics of Material required?
16. ☒ Yes ☐ No Is Chemical Characteristics of Material required?
17. ☐ Yes ☒ No Is Radiological Characteristics of Material required?
18. ☐ Yes ☒ No Is this a lab pack?
19. ☐ Yes ☒ No Is determination of underlying hazardous constituents required?
20. ☒ Yes ☐ No Is supporting documentation submitted? If yes, list: WDDF, analytical data, Environmental Restoration document references
21. ☐ Yes ☒ No Additional narrative:

## Current Generation Estimates

Estimate Date	Start Year	Int. Yrs.	Volume		Mass		Data Entry By		Inactivated By	
			Quan.	Units	Quan.	Units	User ID	Date	User ID	Date
16-Jun-2001	2001	1	320	CY			roher	16-Jun-2001		

## Characteristics of Material

### 1. Physical Characteristics of Material

#### a. Layer characteristics:

Layer No.	Physical State at 70 degrees F	Range of Percentage of Total	Description (as required by GI)
1.	solid	to 100 vol%	

#### b. Density of material or waste (NA for hazardous waste and recyclable material).

Liquid: \_\_\_\_\_ to \_\_\_\_\_ g/ml Solid: \_\_\_\_\_ to \_\_\_\_\_

- c. ☐ Yes ☒ No Is this aqueous waste to be processed in the PWTU? If yes, give total solids range for representative sample:  
\_\_\_\_\_ to \_\_\_\_\_ g/ml

- d. ☐ Yes ☒ No Is this WERF incinerable liquid? If yes, give viscosity range:  
\_\_\_\_\_ to \_\_\_\_\_ SSU

### 2. Chemical Characteristics of Material:

- a. Does the material contain any of the following? For each item checked yes, must include corresponding quantitative information in 2b.

Yes No

☐ ☒ Free liquid - Organic based

☐ ☒ Free liquid - Aqueous based

20-Jun-2001

Report[MaterialProfile], Integrated Waste Tracking System

Page 3



# Integrated Waste Tracking System

## Material and Waste Characterization Profile

### INFORMATION ONLY



2954N : Non-RCRA, non-rad soil, concrete, and fencing materials from OU 4-13 transformer Yard

Yes No

- ☐ ☒ Absorbents
- ☐ ☒ Chelating agents
- ☐ ☒ Aqueous liquid with reactive cyanide  $\geq 250$  ppm
- ☐ ☒ Aqueous liquid with reactive sulfide  $\geq 500$  ppm
- ☐ ☒ Air reactives
- ☐ ☒ Water reactives
- ☐ ☒ Other reactives
- ☐ ☒ Fuming acids or acid gases
- ☐ ☒ Shock sensitive constituents
- ☐ ☒ Explosives
- ☐ ☒ Pyrophorics
- ☐ ☒ Petroleum products
- ☐ ☒ Oxidizers
- ☐ ☒ Benzene
- ☐ ☒ PCBs  $\geq 25$  ppm
- ☐ ☒ PCBs  $\geq 5$  ppm
- ☐ ☒ PCB liquids
- ☐ ☒ PCB capacitors/ballasts
- ☐ ☒ PCB transformers/regulators
- ☐ ☒ PCB liquid contaminated debris or derived from a spill of PCB liquid
- ☐ ☒ PCBs  $\geq 50$  ppm

Yes No

For fluid to be process in the PWTU only

- ☐ ☒ Oil and grease  $\geq 10$  mg/L

For liquid waste only

- ☐ ☒ Halogenated organic compounds  $\geq 1000$  mg/L as listed in 40 CFR 268, Appendix III
- ☐ ☒ Nickel and/or its compounds (as Ni)  $\geq 134$  mg/L
- ☐ ☒ Thallium and/or its compounds (as Tl)  $\geq 103$  mg/L

For solid waste only

- ☐ ☒ Halogenated organic compounds  $\geq 1000$  mg/L as listed in 40 CFR 268, Appendix III

For used oil only

- ☐ ☒ Arsenic  $\geq 5$  ppm
- ☐ ☒ Cadmium  $\geq 2$  ppm
- ☐ ☒ Chromium  $\geq 10$  ppm
- ☐ ☒ Lead  $\geq 100$  ppm
- ☐ ☒ PCBs  $\geq 2$  ppm
- ☐ ☒ Total halogens  $\geq 1,000$  ppm
- ☐ ☒ Total halogens  $\geq 4,000$  ppm

WERF incinerable wastes only

- ☐ ☒ Bromine in any form
- ☐ ☒ Chlorine in any form
- ☐ ☒ Fluorine in any form
- ☐ ☒ Iodine in any form
- ☐ ☒ PCBs  $\geq 2$  ppm
- ☐ ☒ Sulfur in any form

## 2. Chemical Characteristics of Material (continued)

### b. Composition of material:

Related Characteristic (*Other* Where NA)	Name of Material or Chemical	Carcinogen	Composition Range		
			From	To	Units
*Other*	soil	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	50	70	vol%
Concrete	concrete pad	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	15	25	vol%
Metal combinations or assemblies	Galvanized fencing	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	0	5	vol%



# Integrated Waste Tracking System Material and Waste Characterization Profile INFORMATION ONLY



2954N : Non-RCRA, non-rad soil, concrete, and fencing materials from OU 4-13  
transformer Yard

c. ☐ Yes ☒ No Is flash point required? If yes, complete the following:

Flash point is: \_\_\_\_\_ to \_\_\_\_\_ Method used: \_\_\_\_\_

(Specify Other): \_\_\_\_\_

d. Information for WERF incinerable waste only:

(1) Heat of combustion \_\_\_\_\_ to \_\_\_\_\_ BTU/lb (2) Ash content \_\_\_\_\_ to \_\_\_\_\_ wt%

(3) Total halogen content \_\_\_\_\_ to \_\_\_\_\_ ppm (4) Water content \_\_\_\_\_ to \_\_\_\_\_ wt%

(5) Suspended particulates content \_\_\_\_\_ to \_\_\_\_\_ ppm

☐ Yes ☒ No Is Total Metals analysis required? If yes, enter data below, as applicable.

Metal	Known or Expected?	Expected Composition Range	Representative Sample Analysis	Detection Limit	Units
Antimony (Sb)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	_____ to _____	2.9 to 9.5	_____	mg/kg
Arsenic (As)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	_____ to _____	4.2 to 11.6	_____	mg/kg
Barium (Ba)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	_____ to _____	119 to 271	_____	mg/kg
Beryllium (Be)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	_____ to _____	0.74 to 0.85	_____	mg/kg
Cadmium (Cd)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	_____ to _____	1.4 to 7.3	_____	mg/kg
Chromium (Cr)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	_____ to _____	28.6 to 102	_____	mg/kg
Cobalt (Co)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	_____ to _____	8.8 to 15.7	_____	mg/kg
Copper (Cu)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	_____ to _____	36.3 to 259	_____	mg/kg
Iron (Fe)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	_____ to _____	18100 to 73500	_____	mg/L
Lead (Pb)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	_____ to _____	16.5 to 5560	_____	mg/kg
Manganese (Mn)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	_____ to _____	344 to 509	_____	mg/kg
Mercury (Hg)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	_____ to _____	0.05 to 0.09	_____	mg/kg
Molybdenum (Mo)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	_____ to _____	_____ to _____	_____	_____
Nickel (Ni)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	_____ to _____	28 to 111	_____	mg/kg
Potassium (K)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	_____ to _____	1170 to 2150	_____	mg/kg
Selenium (Se)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	_____ to _____	_____ to _____	_____	_____
Silver (Ag)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	_____ to _____	0.75 to 2.3	_____	mg/kg
Sodium (Na)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	_____ to _____	118 to 216	_____	mg/kg
Thallium (Tl)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	_____ to _____	_____ to 0.15	_____	mg/kg
Vanadium (V)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	_____ to _____	17 to 27.4	_____	mg/kg
Zinc (Zn)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	_____ to _____	128 to 1150	_____	mg/kg



Integrated Waste Tracking System  
Material and Waste Characterization Profile  
INFORMATION ONLY



2954N : Non-RCRA, non-rad soil, concrete, and fencing materials from OU 4-13  
transformer Yard

e. ☒ Yes ☐ No Is RCRA Waste Analysis Required (e.g., TCLP Data)?

☒ Yes ☐ No Were the sampling and analysis protocols used in full compliance with SW-846 protocol or other equivalent regulatory agency approved methods?

f. RCRA Hazardous Constituents (Concentration Based D004-D043)

EPA Code	Hazardous Constituent	Exp.? (Y,N)	TCLP Values	Type	Waste Concentration Range			Representative Sample			Detect Limit	
					From	To	Units	From	To	Units	Limit	Units
Metals:												
D004	Arsenic	<input type="checkbox"/> <input checked="" type="checkbox"/>			-			-				
D005	Barium	<input type="checkbox"/> <input checked="" type="checkbox"/>			-			-				
D006	Cadmium	<input type="checkbox"/> <input checked="" type="checkbox"/>			-			-				
D007	Chromium	<input type="checkbox"/> <input checked="" type="checkbox"/>			-			-				
D008	Lead	<input type="checkbox"/> <input checked="" type="checkbox"/>			-			-				
D009	Mercury	<input type="checkbox"/> <input checked="" type="checkbox"/>			-			-				
D010	Selenium	<input type="checkbox"/> <input checked="" type="checkbox"/>			-			-				
D011	Silver	<input type="checkbox"/> <input checked="" type="checkbox"/>			-			-				
Volatiles:												
D018	Benzene	<input type="checkbox"/> <input checked="" type="checkbox"/>			-			-				
D019	Carbon tetrachloride	<input type="checkbox"/> <input checked="" type="checkbox"/>			-			-				
D021	Chlorobenzene	<input type="checkbox"/> <input checked="" type="checkbox"/>			-			-				
D022	Chloroform	<input type="checkbox"/> <input checked="" type="checkbox"/>			-			-				
D027	p-Dichlorobenzene (1,4-Dichlorobenzene)	<input type="checkbox"/> <input checked="" type="checkbox"/>			-			-				
D028	1,2-Dichloroethane	<input type="checkbox"/> <input checked="" type="checkbox"/>			-			-				
D029	1,1-Dichloroethylene	<input type="checkbox"/> <input checked="" type="checkbox"/>			-			-				
D035	Methyl ethyl ketone	<input type="checkbox"/> <input checked="" type="checkbox"/>			-			-				
D038	Pyridine	<input type="checkbox"/> <input checked="" type="checkbox"/>			-			-				
D039	Tetrachloroethylene	<input type="checkbox"/> <input checked="" type="checkbox"/>			-			-				
D040	Trichloroethylene	<input type="checkbox"/> <input checked="" type="checkbox"/>			-			-				
D043	Vinyl chloride	<input type="checkbox"/> <input checked="" type="checkbox"/>			-			-				
Semi-Volatiles:												
D023	o-Cresol	<input type="checkbox"/> <input checked="" type="checkbox"/>			-			-				
D024	m-Cresol	<input type="checkbox"/> <input checked="" type="checkbox"/>			-			-				
D025	p-Cresol	<input type="checkbox"/> <input checked="" type="checkbox"/>			-			-				
D028	Cresol	<input type="checkbox"/> <input checked="" type="checkbox"/>			-			-				
D030	2,4-Dinitrotoluene	<input type="checkbox"/> <input checked="" type="checkbox"/>			-			-				
D032	Hexachlorobenzene	<input type="checkbox"/> <input checked="" type="checkbox"/>			-			-				
D033	Hexachlorobutadiene	<input type="checkbox"/> <input checked="" type="checkbox"/>			-			-				
D034	Hexachloroethane	<input type="checkbox"/> <input checked="" type="checkbox"/>			-			-				





# Integrated Waste Tracking System Material and Waste Characterization Profile INFORMATION ONLY



2954N : Non-RCRA, non-rad soil, concrete, and fencing materials from OU 4-13  
transformer Yard

EPA Code	Hazardous Constituent	Exp.? (Y,N)	TCLP Values	Type	Waste Concentration Range			Representative Sample			Detect Limit	
					From	To	Units	From	To	Units	Limit	Units
Semi-Volatiles:												
D036	Nitrobenzene	<input type="checkbox"/>	<input checked="" type="checkbox"/>		-			-				
D037	Pentachlorophenol	<input type="checkbox"/>	<input checked="" type="checkbox"/>		-			-				
D041	2,4,5-Trichlorophenol	<input type="checkbox"/>	<input checked="" type="checkbox"/>		-			-				
D042	2,4,6-Trichlorophenol	<input type="checkbox"/>	<input checked="" type="checkbox"/>		-			-				
Pesticides and Herbicides:												
D012	Endrin	<input type="checkbox"/>	<input checked="" type="checkbox"/>		-			-				
D012	Endrin, Endrin aldehyde	<input type="checkbox"/>	<input checked="" type="checkbox"/>		-			-				
D013	Lindane, alpha-BHC	<input type="checkbox"/>	<input checked="" type="checkbox"/>		-			-				
D013	Lindane, beta-BHC	<input type="checkbox"/>	<input checked="" type="checkbox"/>		-			-				
D013	Lindane, delta-BHC	<input type="checkbox"/>	<input checked="" type="checkbox"/>		-			-				
D013	Lindane, gamma-BHC (Lindane)	<input type="checkbox"/>	<input checked="" type="checkbox"/>		-			-				
D014	Methoxychlor	<input type="checkbox"/>	<input checked="" type="checkbox"/>		-			-				
D015	Toxaphene	<input type="checkbox"/>	<input checked="" type="checkbox"/>		-			-				
D016	2,4-D	<input type="checkbox"/>	<input checked="" type="checkbox"/>		-			-				
D017	2,4,5-TP (Silvex)	<input type="checkbox"/>	<input checked="" type="checkbox"/>		-			-				
D020	Chlordane	<input type="checkbox"/>	<input checked="" type="checkbox"/>		-			-				
D031	Heptachlor	<input type="checkbox"/>	<input checked="" type="checkbox"/>		-			-				
D031	Heptachlor epoxide	<input type="checkbox"/>	<input checked="" type="checkbox"/>		-			-				

Note: "Type" column designates type of analysis. (1=Approved Methods, 2=Process Knowledge, 3=Both)

g. RCRA Hazardous Constituents (Other)

h. Underlying Hazardous Constituents

i. Analyte Data

Analyte	Flammable	TCLP Values	Type	Concentration Range			Representative Sample			Detect Limit	
				From	To	Units	From	To	Units	Limit	Units
Polychlorinated Biphenyl (PCB)	No	No	1	-	-		.45	1.4	mg/kg		

Note: "Type" column designates type of analysis. (1=Approved Methods, 2=Process Knowledge, 3=Both)



# Integrated Waste Tracking System Material and Waste Characterization Profile INFORMATION ONLY



2954N : Non-RCRA, non-rad soil, concrete, and fencing materials from OU 4-13  
transformer Yard

## 3. Radiological Characteristics of Material:

- a. ☐ Yes ☐ No Is accountable fissile material present ( $\geq 0.02$  g/lb waste matrix)?  
If yes, waste matrix group is: \_\_\_\_\_
- b. ☐ Yes ☐ No Are transuranic isotopes present? If yes, complete items 3c, 3d, and 3e.
- c. Total transuranic activity per gram of waste is: ☐  $\leq 10$  nCi/g (LLW) or  
☐  $> 10$  nCi/g and  $\leq 100$  nCi/g (Alpha LLW) or  
☐  $> 100$  nCi/g (TRU)
- d. Transuranic isotope inventory:  
**Note:** Sample Analysis Activity and Fissionable Material Units must correspond to Activity Range and Fissionable Material Range.
- e. ☐ Yes ☐ No Is U-233 or U-235 present?  
**Note:** Sample Analysis Activity and Fissionable Material Units must correspond to Activity Range and Fissionable Material Range.
- f. ☒ Yes ☐ No Are other isotopes present?
- g. Expected radiation dose rate at surface: \_\_\_\_\_ to \_\_\_\_\_ mrem/hr  
at 1-meter: \_\_\_\_\_ to \_\_\_\_\_ mrem/hr
- h. ☐ Yes ☐ No Is the waste greater than Class C as defined in 10 CFR 61.557?
- i. Content Codes:

## Comments

Insert Info	Comments
roher 06/19/2001	The transformer yard soil was analyzed for PCBs. Concentrations range from .45 to 1.4 ppm.
roher 06/19/2001	Soil was analyzed for chromium and lead by TCLP. Results indicate concentrations below regulatory limits for characteristic waste and for universal treatment standards.
roher 06/19/2001	The top 6 inches of soil will be removed from the grids identified as non-hazardous. This soil will be loaded into dump trucks and transported to the landfill. The next 6 inches of soil will be sampled and analyzed for total lead and by TCLP. Soil over the Final Remediation Goal of 400 mg/kg as specified in the ROD will be excavated and considered non-hazardous if the TCLP results are also below 5 mg/L. This soil will fit under this profile and will be disposed at the CFA landfill. Soil exceeding TCLP limits will fit under profile 2957Q and will be disposed offsite at a permitted TSDF. Soil will be removed in 6 inch lifts until the Final Remediation Goal is met. When total volume of excavated soil has been determined, a note to the profile will be added. Volumes entered on the volume screen are estimates.
roher 06/19/2001	By the way, the transformer yard operated as a transformer yard for approximately 3 years. It was a weld shop for 20 years prior.

## Supplemental Information



Integrated Waste Tracking System  
Material and Waste Characterization Profile  
INFORMATION ONLY



2954N : Non-RCRA, non-rad soil, concrete, and fencing materials from OU 4-13  
transformer Yard

B. Profile Change History:

User Name	Date	Explanation
ShepherdL	20-Jun-2001 08:17 AM	Unlock for Review & Approval for Landfill Disposal; Completed WDDF, Sampling and Analysis Plans, analytical results submitted & attached to file; see WROC-PROJ-135 file for support documentation.
ShepherdL	20-Jun-2001 08:17 AM	BEGIN VALIDATION FOR MATERIAL PROFILE APPROVE
		SHEPHERDL. wgs. Call Point-7. Authorized on Generating Unit ( OU4-13).
		COMPOSITION VALIDATION PASSED
		OVERALL VALIDATION PASSED
ShepherdL	20-Jun-2001 08:15 AM	SHEPHERDL. wgs. Call Point-4. Authorized on Generating Unit ( OU4-13).
floods	20-Jun-2001 07:35 AM	BEGIN VALIDATION FOR MATERIAL PROFILE REVIEW
		FLOODS. wgs. Call Point-6. Authorized on Generating Unit ( OU4-13).
		COMPOSITION VALIDATION PASSED
		OVERALL VALIDATION PASSED
roher	19-Jun-2001 11:32 AM	to add a comment
roher	19-Jun-2001 11:31 AM	ROHER. wgs. Call Point-4. Authorized on Generating Unit ( OU4-13).
roher	19-Jun-2001 09:54 AM	BEGIN VALIDATION FOR MATERIAL PROFILE CERTIFY
		ROHER. wgs. Call Point-5. Authorized on Generating Unit ( OU4-13).
		COMPOSITION VALIDATION PASSED
		OVERALL VALIDATION PASSED
roher	19-Jun-2001 08:47 AM	to continue to input characterization information
roher	19-Jun-2001 08:46 AM	ROHER. wgs. Call Point-4. Authorized on Generating Unit ( OU4-13).
roher	16-Jun-2001 05:34 PM	ROHER. wgs. Call Point-4. Authorized on Generating Unit ( OU4-13).
roher	16-Jun-2001 05:27 PM	to continue to input characterization information

End of Report

435.59  
03/03/2000  
Rev. 04

**Waste Stream Name:** Contaminated soil/concrete debris from OU 4-13 Transformer Yard

**Material Profile Number: 2957Q**

**WDDF Number (Optional):**

Charge #: 3XCC22T163

D-31

435.39  
03/03/2000  
Rev. 04

# INEEL WASTE DETERMINATION & DISPOSITION FORM (WDDE)

Waste Stream Name: Contaminated soil/concrete debris from OU 4-13 Transformer Yard Material Profile Number: 2957Q

11. Waste Composition: (Must total 100%). Attachment Included: ☐ Yes ☒ No ☐ NA

Constituent	CAS No.	Analysis or PK	(If constituent is <1%, use mg/kg or mg/L, otherwise report in %)	Range From To Units	Used as a Solvent? (Y/N)	Comments
Metal concentrations listed in IWTS						
100 % soil/concrete PPE						

12. Radioisotopes: Are radioisotopes present? ☐ Yes, if Yes, refer to attachment ☒ No, if No, include signed form 435.02

SECTION II: PROBABLE WASTE TYPE: (Completed by the Facility Representative and used to assign waste technical specialist and for appropriate management until final waste determination is made.)

Based on evaluation of the process and available data the waste type indicated is (check all that apply):

<input checked="" type="checkbox"/> Hazardous Only	<input type="checkbox"/> Mixed	<input type="checkbox"/> Radioactive Only	<input type="checkbox"/> Conditional Industrial	<input type="checkbox"/> Used Oil
<input type="checkbox"/> Material Exchange	<input type="checkbox"/> Lab Pack	<input type="checkbox"/> Non-conditional Industrial	<input type="checkbox"/> TSCA	<input type="checkbox"/> Other - Describe:
<input type="checkbox"/> Recyclable: <input type="checkbox"/> Non Radioactive Lead (>99+ % Lead) <input type="checkbox"/> Lead Batteries <input type="checkbox"/> Silver <input type="checkbox"/> RCRA Scrap metal <input type="checkbox"/> Other - Describe:				

Indicated Waste Codes: D008, D006

## CERTIFICATION

I certify that the information in Section I of this form and the applicable attachments are fully disclosed. A good faith effort has been put forward to acquire and verify the information. Willful or deliberate omissions have not been made, and all known and suspected hazards have, to the best of my knowledge, been identified. The WGS Facility Representative, based on information provided, has assigned a probable waste type in Section II.

Deborah Wiggins Wagoner  
Generator Name  
Typed/Printed

*Deborah Wiggins Wagoner*  
Signature

6/19/01  
Date

Rhonda D. Rohe  
WGS Facility Representative Name  
Typed/Printed

*Rhonda D. Rohe*  
Signature

6/19/01  
Date

# INEEL WASTE DETERMINATION & DISPOSITION FORM (WDDF)

SECTION III WASTE DETERMINATION AND DISPOSITION (Completed by the WGS Technical Specialist)	
<b>A. Waste Determination</b>	
1. Is this a solid waste (per 40 CFR 261.2)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (If No, attach regulatory citation)
2. Is this a Hazardous Waste (per 40 CFR 261.3)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
3. Is waste excluded from regulation under 40 CFR 261.4?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Regulatory citation:
4. Is waste subject to 40 CFR 268 regulations?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, is the waste a: <input type="checkbox"/> Waste Water or <input checked="" type="checkbox"/> Non Wastewater.
Is there a specified method of treatment? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, list the specified method: 0.11 mg/L TCLP for Cadmium, and 0.75 mg/L TCLP for lead and meet SS 268.48 standards	
5. Is waste listed in Subpart D of 40 CFR 261?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If Yes, provide waste codes, regulated hazardous constituent(s), and an explanation of determination.)
Attachment Included: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Codes: None	
6. Is waste characteristic per Subpart C of 40 CFR 261? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (If Yes, provide waste codes, regulatory subcategory, and an explanation of determination.)	
Attachment Included: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Codes: D006, and D008 Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for cadmium and lead based on toxicity characteristic leaching procedure (TCLP) in SW846	
7. If hazardous, is the waste excluded for recycling in accordance with 40 CFR 261.2(e)(1)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, regulatory Citation:
8. Is the waste mixed or low level?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If Yes, include attachment with isotopic information.)
9. Is waste TSCA regulated for either of the following? PCBs: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Asbestos: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
<b>B. Evaluation of Underlying Hazardous Constituents (UHCs)</b>	
Does the waste require evaluation in accordance with 40 CFR 268.48? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (If Yes, identify UHCs.) UHCs: <u>Asbestos</u> Attachment Included: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
<b>C. Disposition and Data Gap Evaluation: (Attachment Included: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No)</b>	
1. Proposed Disposition (storage, treatment, disposal pathway):	Offsite disposal
2. Will this waste be treated in a <90 storage area?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If Yes, attach plan.) (Mixed and Hazardous Only)
3. Is the information provided adequate for complete waste determination, management, transportation, treatment, and disposal of waste? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, identify additional information or analysis required.	
<b>D. Verification requirements: (Attachments Included: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No)</b>	
1. Will verification be performed on this waste? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, describe the verification to be performed. visual inspection at time of containerization	
At Initial Storage Location: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Immediately Prior to Shipment: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
2. What is the verification frequency? once	

# INEEL WASTE DETERMINATION & DISPOSITION FORM (WDDF)

**E. Packaging and Transportation Requirements (to be completed by P&T): Complete this section only if wastes are to be transported.**

1. Is waste a DOT Regulated Hazardous Material? ☒ Yes ☐ No If Yes: DOT Primary Hazard: D001, D008 DOT Subsidiary Hazard:

2. Recommended Packaging: PE III

3. Probable Basic Description (PSN, Hazard Class, DOT ID #, PG): PO Hazardous Waste Solid, N.O.S., 9, NA 3077

4. Other information (special shipping conditions, etc.):

5. If containers are already generated, are they packaged correctly for the DOT hazard class? ☐ Yes ☐ No If No, list container required.

Packaging & Transportation Name Typed/Printed	Packaging & Transportation Signature	Date
Stephen Kestus	<i>Stephen Kestus</i>	7/9/01

Summary of Waste Determination:	Hazardous (see codes listed above)	Mixed Low-Level (see codes listed above)	Low-Level	Conditional Industrial	Other (describe)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## CERTIFICATIONS

I certify that the information in Section III of this form and the applicable attachments are fully disclosed and accurate. A good faith effort has been put forward to acquire and verify the information. Willful or deliberate omissions have not been made, and all known and suspected hazards have, to the best of my knowledge, been identified.

Jeffrey C. Messaros WGS Technical Specialist Name Typed/Printed	<i>Jeffrey C. Messaros</i> WGS Technical Specialist Signature	6/19/01 Date
Sydney Flood WGS Independent Reviewer Name Typed/Printed	<i>Sydney Flood</i> WGS Independent Reviewer Signature	7/9/01 Date
Low Level Waste Hazardous Waste Determination Review Name Typed/Printed	Low Level Waste Hazardous Waste Determination Review Signature	Date

Additional Narrative Information (As Needed):



# Integrated Waste Tracking System Material and Waste Characterization Profile INFORMATION ONLY



2957Q : Cadmium and lead contaminated soil and PPE from CFA-10 Transformer Yard,  
OU4-13

## Waste Stream Approval

Version 3  
APPROVED



The Material and Waste Characterization Profile characterization data meets the appropriate Site acceptance criteria (or a contracted Off-Site Vendor's acceptance criteria) for the associated material or waste type and action. A regulatory based disposition is identified for the material or waste defined by this profile. Independent review was performed and comments from the review addressed. Approval to offer this material or waste for disposition is granted.

Material Profile No.: 2957Q

Date Assigned: 15-Jun-2001 05:21:25 PM

Profile Name: Cadmium and lead contaminated soil and PPE from CFA-10 Transformer Yard, OU4-13

Site Treatment Plan ID:

Generating Location: OU4-13 : WAG 4 Operable Unit 4-13

Waste Type and Action: Hazardous Waste: to Private Sector Facilities

Approve Statement: David Rizor Date: 09-Jul-2001 01:59 PM

Status: ☒ Active (waste currently being generated)  
☐ Inactive (waste not currently being generated)  
☐ Cancelled (waste never generated)

## Last Profile Update or Annual Review Approval

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Data Certification

CERTIFIED



A waste determination process for this waste stream has been performed. Characterization data was derived by approved analytical methods or process knowledge information and any data limitations have been documented. Legally and scientifically defensible data was used for characterization whenever possible. The required data provided in this Material & Waste Characterization Profile is complete and accurate based on the analytical data or process knowledge information used for characterization.

Name: Rhonda Rohe Title: Waste Technical Specialist Date: 05-Jul-2001 Org: 6760

Phone: (208) 526-1048 Mail Stop: 3940 Facsimile No.: (208) 526-8632 E-Mail ID: ROHERD

Generating Facility: WAG 4 : Waste Area Group 4 - CFA

Generating Unit: OU4-13 : WAG 4 Operable Unit 4-13

## Data Review

REVIEWED



A review of the Material and Waste Characterization Profile has shown that a waste determination was performed and that the required profile data is complete and accurate based on the analytical data or process knowledge information provided. The characterization data is sufficient to justify an approval or disapproval for the material or waste to be offered for disposition.

Name: Richard (Dick) Johnson Title: PRINCIPAL TECHNICAL SPECIALIST Date: 07/09/2001 Org: 3220

Phone: (208) 526-9191 Mail Stop: 8102 Facsimile No.: (208) 526-8007 E-Mail ID: RJJ@inel.gov





# Integrated Waste Tracking System Material and Waste Characterization Profile INFORMATION ONLY



2957Q: Cadmium and lead contaminated soil and PPE from CFA-10 Transformer Yard,  
OU4-13

## General Information

1. ☒ Yes ☐ No Will material and waste characterization be fully capable of complying with applicable RRWAC subsection?

If "No", receiving organization approval and completion of the following is required:

- a. INEEL-RRWAC requirement(s) not met (list each):  
b. Receiving organization approval letter number for nonstandard material or waste:

Contact	Name	E-Mail ID	Phone	Pager	Mail Stop
2. Generator Contact	Deborah Wagoner	wigg@inel.gov	(208) 526-9989	7699	3950
3. Technical Contact	Rhonda Rohe	ROHERD	(208) 526-1048	9171	3940

Charge Number: 3XCC22T16

4. Material or waste type and action: Hazardous Waste: to Private Sector Facilities

5. Profile Name: Cadmium and lead contaminated soil and PPE from CFA-10 Transformer Yard, OU4-13

6. Waste Generated From: Is this secondary Cleanup/Stab. waste? Cleanup/Stabilization Activity: Generating Status: **NOTE:** Indicates whether there will be one shipment or a series of shipments
- ☐ Routine Operations ☐ Yes ☒ No  
☒ Cleanup/Stabilization Activities ☐ Environmental Restoration ☒ One time only  
☐ On-going

7. Generating process description: This waste stream is from the OU 4-13 Transformer Yard (CFA-10) cleanup of RCRA, non-PCB soil, concrete, and site fencing materials. Soil is being excavated to meet the Final Remediation Goal of 400 mg/kg for lead as mandated by the "Final Comprehensive Record of Decision for Central Facilities Area Operable Unit 4-13". Due to the scope of this remediation project, it can be expected that this waste generation will require multiple roll-off containers for offsite disposal. The non-RCRA soil information can be found under material profile 2954N. The fencing was recycled as scrap metal.

The areas of hazardous soil are in grid 5 and a small portion of grid 2 as shown in Figure 4-1 of the sampling plan for the transformer yard (June 2001). This figure is contained in the hard copy of the material profile. The areas of hazardous soil contain lead and cadmium at concentrations over the regulatory limit. Non-hazardous portions of soil are in grids 1, the remaining portion of 2, and in 3, 4, 6, 7, 8, 9, and 10.

Further information regarding the CFA-10 transformer yard can be found in several documents. They are 1) "Comprehensive Remedial Investigation/Feasibility Study for the Central Facilities Area Operable Unit 4-13 at the Idaho National Engineering and Environmental Laboratory", DOE/ID-10680, Rev. 1, July 2000, 2) "Final Comprehensive Record of Decision for Central Facilities Area Operable Unit 4-13", DOE/ID-10719, Rev. 2, July 2000, 3) "Remedial Design/Remedial Action Work Plan Idaho National Engineering and Environmental Laboratory Central Facilities Area, Operable Unit 4-13 Transformer Yard (CFA-10)", DOE/ID-10826, Rev. 0, April 2001, and 4) "Field Sampling Plan for the Idaho National Engineering and Environmental Laboratory, Central Facilities Area, Operable Unit 4-13, Transformer Yard (CFA-10)", DOE/ID-10857, Rev. 2, June 2001.

8. Physical state at 70 degrees F (solid, liquid, sludge, gel, etc.): solid

9. ☐ Yes ☒ No Does the material contain free liquids?

10. ☒ Yes ☐ No Current waste minimization plan? (INEEL Generators Only)

Reference: INEEL P2 Plan DOE/ID-10333 (00)

11. Indicate all that apply:

- ☒ CERCLA ☐ Etiologic Agent ☐ Used oil ☒ Soil ☐ Classified material  
☐ Scrap Metal ☐ Nonfriable asbestos ☐ Aerosol cans ☒ Debris - RCRA ☐ Accountable nuclear material  
☐ OSHA carcinogen ☐ FIFRA ☐ Compressed gas cylinders ☐ Spill cleanup ☐ > 100 PPM VOCs  
☐ PCB >= 50 ppm ☐ Unused material ☐ Friable asbestos ☐ Wastewater ☐ Universal Waste



# Integrated Waste Tracking System Material and Waste Characterization Profile INFORMATION ONLY



2957Q : Cadmium and lead contaminated soil and PPE from CFA-10 Transformer Yard,  
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12. ☒ Yes ☐ No Is this DOT regulated hazardous material? If yes, identify DOT primary hazard: 9  
and DOT subsidiary hazard(s):
13. ☒ Yes ☐ No At the point of generation did this material contain RCRA "F", "K", "U", or "P" listed waste either in pure form, as a mixture, or as a treatment residual (i.e., ash, leachate, spill cleanup), or "D" characteristic waste? If yes, give applicable EPA:  
Source Code: G44 : Remediation of Past Contamination : State program or voluntary cleanup  
Form Code: W301 : Mixed Media/Debris/Devices : Contaminated Soil  
and EPA Hazardous Waste Numbers (40 CFR 261): D006,D008  
and attach applicable LDR notification and certification (40 CFR 261):
14. RCRA hazardous waste determination was made by: ☐ Waste analysis, ☐ Process knowledge and/or ☒ Both
15. ☐ Yes ☒ No Is Physical Characteristics of Material required?
16. ☒ Yes ☐ No Is Chemical Characteristics of Material required?
17. ☐ Yes ☒ No Is Radiological Characteristics of Material required?
18. ☐ Yes ☒ No Is this a lab pack?
19. ☒ Yes ☐ No Is determination of underlying hazardous constituents required?
20. ☒ Yes ☐ No Is supporting documentation submitted? If yes, list: WDDF, 1995, 1998, and 2001 analytical data, Environmental Restoration document reference, Field Sampling Plan (DOE/ID-10857, Rev. 2)
21. ☐ Yes ☒ No Additional narrative:

## Current Generation Estimates

Estimate Date	Start Year	Int. Yrs.	Volume		Mass		Data Entry By		Inactivated By	
			Quan.	Units	Quan.	Units	User ID	Date	User ID	Date
05-Jul-2001	2001	1	40	CY			RoheR	05-Jul-2001		

## Characteristics of Material

1. Physical Characteristics of Material
- a. Layer characteristics:
- | Layer No. | Physical State at 70 degrees F | Range of Percentage of Total | Description (as required by GI) |
|-----------|--------------------------------|------------------------------|---------------------------------|
| 1.        | solid                          | 100 to 100 wt%               | various                         |
- b. Density of material or waste (NA for hazardous waste and recyclable material).  
Liquid: \_\_\_\_\_ to \_\_\_\_\_ g/ml Solid: \_\_\_\_\_ to \_\_\_\_\_
- c. ☐ Yes ☒ No Is this aqueous waste to be processed in the PWTU? If yes, give total solids range for representative sample:  
\_\_\_\_\_ to \_\_\_\_\_ g/ml
- d. ☐ Yes ☒ No Is this WERF inclinable liquid? If yes, give viscosity range:  
\_\_\_\_\_ to \_\_\_\_\_ SSU
2. Chemical Characteristics of Material:
- a. Does the material contain any of the following? For each item checked yes, must include corresponding quantitative information in 2b.
- Yes No  
☐ ☒ Free liquid - Organic based



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Yes No

- ☐ ☒ Free liquid - Aqueous based
- ☐ ☒ Absorbents
- ☐ ☒ Chelating agents
- ☐ ☒ Aqueous liquid with reactive cyanide  $\geq 250$  ppm
- ☐ ☒ Aqueous liquid with reactive sulfide  $\geq 500$  ppm
- ☐ ☒ Air reactives
- ☐ ☒ Water reactives
- ☐ ☒ Other reactives
- ☐ ☒ Fuming acids or acid gases
- ☐ ☒ Shock sensitive constituents
- ☐ ☒ Explosives
- ☐ ☒ Pyrophorics
- ☐ ☒ Petroleum products
- ☐ ☒ Oxidizers
- ☐ ☒ Benzene
- ☐ ☒ PCBs  $\geq 25$  ppm
- ☐ ☒ PCBs  $\geq 5$  ppm
- ☐ ☒ PCB liquids
- ☐ ☒ PCB capacitors/ballasts
- ☐ ☒ PCB transformers/regulators
- ☐ ☒ PCB liquid contaminated debris or derived from a spill of PCB liquid
- ☐ ☒ PCBs  $\geq 50$  ppm

Yes No

For fluid to be process in the PWTU only

- ☐ ☒ Oil and grease  $\geq 10$  mg/L

For liquid waste only

- ☐ ☒ Halogenated organic compounds  $\geq 1000$  mg/L as listed in 40 CFR 268, Appendix III
- ☐ ☒ Nickel and/or its compounds (as Ni)  $\geq 134$  mg/L
- ☐ ☒ Thallium and/or its compounds (as TI)  $\geq 103$  mg/L

For solid waste only

- ☐ ☒ Halogenated organic compounds  $\geq 1000$  mg/L as listed in 40 CFR 268, Appendix III

For used oil only

- ☐ ☒ Arsenic  $\geq 5$  ppm
- ☐ ☒ Cadmium  $\geq 2$  ppm
- ☐ ☒ Chromium  $\geq 10$  ppm
- ☐ ☒ Lead  $\geq 100$  ppm
- ☐ ☒ PCBs  $\geq 2$  ppm
- ☐ ☒ Total halogens  $\geq 1,000$  ppm
- ☐ ☒ Total halogens  $\geq 4,000$  ppm

WERF Incinerable wastes only

- ☐ ☒ Bromine in any form
- ☐ ☒ Chlorine in any form
- ☐ ☒ Fluorine in any form
- ☐ ☒ Iodine in any form
- ☐ ☒ PCBs  $\geq 2$  ppm
- ☐ ☒ Sulfur in any form

2. Chemical Characteristics of Material (continued)

b. Composition of material:

Related Characteristic (*Other* Where NA)	Name of Material or Chemical	Carcinogen	Composition Range		
			From	To	Units
*Other*	PPE	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	0	1	vol%
*Other*	Soil	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	0	99	vol%



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c. ☐ Yes ☒ No Is flash point required? If yes, complete the following:

Flash point is: \_\_\_\_\_ to \_\_\_\_\_ Method used: \_\_\_\_\_

(Specify Other): \_\_\_\_\_

d. Information for WERF incinerable waste only:

(1) Heat of combustion \_\_\_\_\_ to \_\_\_\_\_ BTU/lb (2) Ash content \_\_\_\_\_ to \_\_\_\_\_ wt%

(3) Total halogen content \_\_\_\_\_ to \_\_\_\_\_ ppm (4) Water content \_\_\_\_\_ to \_\_\_\_\_ wt%

(5) Suspended particulates content \_\_\_\_\_ to \_\_\_\_\_ ppm

☒ Yes ☐ No Is Total Metals analysis required? If yes, enter data below, as applicable.

Metal	Known or Expected?		Expected Composition Range	Representative Sample Analysis		Detection Limit	Units
Antimony (Sb)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	_____ to _____	2.9	to 9.5	_____	mg/kg
Arsenic (As)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	_____ to _____	4.2	to 11.6	_____	mg/kg
Barium (Ba)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	_____ to _____	195	to 224	_____	mg/kg
Beryllium (Be)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	_____ to _____	0.48	to 0.85	_____	mg/kg
Cadmium (Cd)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	_____ to _____	_____	to _____	_____	_____
Chromium (Cr)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	_____ to _____	0.001	to 0.004	_____	mg/L
Cobalt (Co)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	_____ to _____	8.8	to 15.7	_____	mg/kg
Copper (Cu)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	_____ to _____	36.3	to 259	_____	mg/kg
Iron (Fe)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	_____ to _____	18100	to 73500	_____	mg/kg
Lead (Pb)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	_____ to _____	_____	to _____	_____	_____
Manganese (Mn)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	_____ to _____	344	to 509	_____	mg/kg
Mercury (Hg)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	_____ to _____	_____	to _____	_____	_____
Molybdenum (Mo)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	_____ to _____	_____	to _____	_____	_____
Nickel (Ni)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	_____ to _____	28	to 111	_____	mg/kg
Potassium (K)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	_____ to _____	1170	to 2150	_____	mg/kg
Selenium (Se)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	_____ to _____	_____	to _____	_____	_____
Silver (Ag)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	_____ to _____	0.75	to 2.3	_____	mg/kg
Sodium (Na)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	_____ to _____	118	to 216	_____	mg/kg
Thallium (Tl)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	_____ to _____	_____	to 0.15	_____	mg/kg
Vanadium (V)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	_____ to _____	17	to 20.3	_____	mg/kg
Zinc (Zn)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	_____ to _____	128	to 1150	_____	mg/kg



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- e. ☒ Yes ☐ No Is RCRA Waste Analysis Required (e.g., TCLP Data)?  
☒ Yes ☐ No Were the sampling and analysis protocols used in full compliance with SW-846 protocol or other equivalent regulatory agency approved methods?
- f. RCRA Hazardous Constituents (Concentration Based D004-D043)

EPA Code	Hazardous Constituent	Exp. ? (Y,N)	TCLP Values	Type	Waste Concentration Range			Representative Sample			Detect Limit		
					From	To	Units	From	To	Units	Limit	Units	
Metals:													
D004	Arsenic	<input type="checkbox"/> <input checked="" type="checkbox"/>							-				
D005	Barium	<input type="checkbox"/> <input checked="" type="checkbox"/>							-				
D006	Cadmium	<input checked="" type="checkbox"/> <input type="checkbox"/>	Yes	3				.014	4.1	mg/L			
D007	Chromium	<input type="checkbox"/> <input checked="" type="checkbox"/>							-				
D008	Lead	<input checked="" type="checkbox"/> <input type="checkbox"/>	Yes	3				16.8	602	mg/L			
D009	Mercury	<input type="checkbox"/> <input checked="" type="checkbox"/>							-				
D010	Selenium	<input type="checkbox"/> <input checked="" type="checkbox"/>							-				
D011	Silver	<input type="checkbox"/> <input checked="" type="checkbox"/>							-				
Volatiles:													
D018	Benzene	<input type="checkbox"/> <input checked="" type="checkbox"/>							-				
D019	Carbon tetrachloride	<input type="checkbox"/> <input checked="" type="checkbox"/>							-				
D021	Chlorobenzene	<input type="checkbox"/> <input checked="" type="checkbox"/>							-				
D022	Chloroform	<input type="checkbox"/> <input checked="" type="checkbox"/>							-				
D027	p-Dichlorobenzene (1,4-Dichlorobenzene)	<input type="checkbox"/> <input checked="" type="checkbox"/>							-				
D028	1,2-Dichloroethane	<input type="checkbox"/> <input checked="" type="checkbox"/>							-				
D029	1,1-Dichloroethylene	<input type="checkbox"/> <input checked="" type="checkbox"/>							-				
D035	Methyl ethyl ketone	<input type="checkbox"/> <input checked="" type="checkbox"/>							-				
D038	Pyridine	<input type="checkbox"/> <input checked="" type="checkbox"/>							-				
D039	Tetrachloroethylene	<input type="checkbox"/> <input checked="" type="checkbox"/>							-				
D040	Trichloroethylene	<input type="checkbox"/> <input checked="" type="checkbox"/>							-				
D043	Vinyl chloride	<input type="checkbox"/> <input checked="" type="checkbox"/>							-				
Semi-Volatiles:													
D023	o-Cresol	<input type="checkbox"/> <input checked="" type="checkbox"/>							-				
D024	m-Cresol	<input type="checkbox"/> <input checked="" type="checkbox"/>							-				
D025	p-Cresol	<input type="checkbox"/> <input checked="" type="checkbox"/>							-				
D026	Cresol	<input type="checkbox"/> <input checked="" type="checkbox"/>							-				
D030	2,4-Dinitrotoluene	<input type="checkbox"/> <input checked="" type="checkbox"/>							-				
D032	Hexachlorobenzene	<input type="checkbox"/> <input checked="" type="checkbox"/>							-				
D033	Hexachlorobutadiene	<input type="checkbox"/> <input checked="" type="checkbox"/>							-				
D034	Hexachloroethane	<input type="checkbox"/> <input checked="" type="checkbox"/>							-				



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EPA Code	Hazardous Constituent	Exp. ? (Y,N)	ICLP Values	Type	Waste Concentration Range			Representative Sample			Detect Limit	
					From	To	Units	From	To	Units	Limit	Units
Semi-Volatiles:												
D036	Nitrobenzene	<input type="checkbox"/>	<input checked="" type="checkbox"/>		-	-		-	-			
D037	Pentachlorophenol	<input type="checkbox"/>	<input checked="" type="checkbox"/>		-	-		-	-			
D041	2,4,5-Trichlorophenol	<input type="checkbox"/>	<input checked="" type="checkbox"/>		-	-		-	-			
D042	2,4,6-Trichlorophenol	<input type="checkbox"/>	<input checked="" type="checkbox"/>		-	-		-	-			
Pesticides and Herbicides:												
D012	Endrin	<input type="checkbox"/>	<input checked="" type="checkbox"/>		-	-		-	-			
D012	Endrin, Endrin aldehyde	<input type="checkbox"/>	<input checked="" type="checkbox"/>		-	-		-	-			
D013	Lindane, alpha-BHC	<input type="checkbox"/>	<input checked="" type="checkbox"/>		-	-		-	-			
D013	Lindane, beta-BHC	<input type="checkbox"/>	<input checked="" type="checkbox"/>		-	-		-	-			
D013	Lindane, delta-BHC	<input type="checkbox"/>	<input checked="" type="checkbox"/>		-	-		-	-			
D013	Lindane, gamma-BHC (Lindane)	<input type="checkbox"/>	<input checked="" type="checkbox"/>		-	-		-	-			
D014	Methoxychlor	<input type="checkbox"/>	<input checked="" type="checkbox"/>		-	-		-	-			
D015	Toxaphene	<input type="checkbox"/>	<input checked="" type="checkbox"/>		-	-		-	-			
D016	2,4-D	<input type="checkbox"/>	<input checked="" type="checkbox"/>		-	-		-	-			
D017	2,4,5-TP (Silvex)	<input type="checkbox"/>	<input checked="" type="checkbox"/>		-	-		-	-			
D020	Chlordane	<input type="checkbox"/>	<input checked="" type="checkbox"/>		-	-		-	-			
D031	Heptachlor	<input type="checkbox"/>	<input checked="" type="checkbox"/>		-	-		-	-			
D031	Heptachlor epoxide	<input type="checkbox"/>	<input checked="" type="checkbox"/>		-	-		-	-			

Note: "Type" column designates type of analysis. (1=Approved Methods, 2=Process Knowledge, 3=Both)

## g. RCRA Hazardous Constituents (Other)

## h. Underlying Hazardous Constituents

## i. Analyte Data

Analyte	Flammable	ICLP Values	Type	Concentration Range			Representative Sample			Detect Limit	
				From	To	Units	From	To	Units	Limit	Units
Polychlorinated Biphenyl (PCB)	No	No	1	-	-		.45	1.4	ppm		

Note: "Type" column designates type of analysis. (1=Approved Methods, 2=Process Knowledge, 3=Both)



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## 3. Radiological Characteristics of Material:

- a. ☐ Yes ☐ No Is accountable fissile material present ( $\geq 0.02$  g/lb waste matrix)?  
If yes, waste matrix group is: \_\_\_\_\_
- b. ☐ Yes ☐ No Are transuranic isotopes present? If yes, complete items 3c, 3d, and 3e.
- c. Total transuranic activity per gram of waste is: ☐  $\leq 10$  nCi/g (LLW) or  
☐  $> 10$  nCi/g and  $\leq 100$  nCi/g (Alpha LLW) or  
☐  $> 100$  nCi/g (TRU)

## d. Transuranic isotope inventory:

Note: Sample Analysis Activity and Fissionable Material Units must correspond to Activity Range and Fissionable Material Range.

- e. ☐ Yes ☐ No Is U-233 or U-235 present?

Note: Sample Analysis Activity and Fissionable Material Units must correspond to Activity Range and Fissionable Material Range.

- f. ☐ Yes ☐ No Are other isotopes present?

- g. Expected radiation dose rate at surface: \_\_\_\_\_ to \_\_\_\_\_ mrem/hr  
at 1-meter: \_\_\_\_\_ to \_\_\_\_\_ mrem/hr

- h. ☐ Yes ☐ No Is the waste greater than Class C as defined in 10 CFR 61.557?

- i. Content Codes:

## Comments

Insert Info	Comments
roher 07/05/2001	This waste stream was evaluated for UHCs and it has been determined that there are none.
roher 07/05/2001	It is anticipated that approximately 40 cu yd of hazardous soil will be generated from this project. Soil is being placed into rolloff containers (20 cu yd capacity) as it is excavated. The containers will not be full when shipped due to weight restrictions per DOT. Under the container profiles for this waste stream, weights of the containers will be input, along with approximate volumes.
roher 07/05/2001	A site treatment plan number is not applicable to this waste stream. This waste stream is hazardous only.

## Supplemental Information

### A. Containers Defined to Date:

Container ID	Container Date	Container Size/Type	Status	De-comm.	Common Name or Material
CFA010104	10-Apr-2001	55 - GAL	Active	<input type="checkbox"/>	Cadmium contaminated soil and PPE from CFA-10 Transformer Yard, OU4-13
WAG010078	03-Jul-2001	20 - CY	Active	<input type="checkbox"/>	Cadmium and lead contaminated soil and PPE from CFA-10 Transformer Yard, OU4-13

09-Jul-2001

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B. Profile Change History:

User Name	Date	Explanation
RizorD	09-Jul-2001 02:01 PM	BEGIN VALIDATION FOR MATERIAL PROFILE APPROVE
		RIZORD: wgs_admin. Call Point-7. Authorized on Generating Unit ( OU4-13).
		COMPOSITION VALIDATION PASSED
		OVERALL VALIDATION PASSED
JohnsonR	09-Jul-2001 10:27 AM	BEGIN VALIDATION FOR MATERIAL PROFILE REVIEW
		JOHNSONR: wgs_admin. Call Point-8. Authorized on Generating Unit ( OU4-13).
		COMPOSITION VALIDATION PASSED
		OVERALL VALIDATION PASSED
JohnsonR	09-Jul-2001 09:45 AM	JOHNSONR: wgs_admin. Call Point-4. Authorized on Generating Unit ( OU4-13).
johnsonr	09-Jul-2001 09:44 AM	Initial WGS OVC review
RoheR	05-Jul-2001 05:55 PM	BEGIN VALIDATION FOR MATERIAL PROFILE CERTIFY
		ROHER: wgs. Call Point-5. Authorized on Generating Unit ( OU4-13).
		COMPOSITION VALIDATION PASSED
		OVERALL VALIDATION PASSED
roher	05-Jul-2001 05:36 PM	to continue to input characterization information
RoheR	05-Jul-2001 05:35 PM	ROHER: wgs. Call Point-4. Authorized on Generating Unit ( OU4-13).
roher	05-Jul-2001 03:00 PM	to continue to input characterization information
RoheR	05-Jul-2001 03:00 PM	ROHER: wgs. Call Point-4. Authorized on Generating Unit ( OU4-13).
MessarosJ	03-Jul-2001 02:45 PM	DOT primary hazard 9
MessarosJ	03-Jul-2001 02:44 PM	MESSAROSJ: wgs. Call Point-4. Authorized on Generating Unit ( OU4-13).
messarosj	19-Jun-2001 02:54 PM	add info to generating process description
messarosj	19-Jun-2001 02:53 PM	MESSAROSJ: wgs. Call Point-4. Authorized on Generating Unit ( OU4-13).
messarosj	19-Jun-2001 02:22 PM	change title to add lead
messarosj	19-Jun-2001 02:22 PM	MESSAROSJ: wgs. Call Point-4. Authorized on Generating Unit ( OU4-13).

End of Report





RHONDA ROHE  
W. Id. # 2957Q  
3XCC22T16

# GENERATOR'S WASTE PROFILE SHEET

PLEASE PRINT IN INK OR TYPE

498435

Service Agreement on File? ☐ YES ☐ NO

Profile Number: WMI

CD 6638

☐ Hazardous ☐ Non-Hazardous ☐ TSCA

Renewal Date:

1/1

## A. Waste Generator Information

- Generator Name: INEEL/US DOE
- SIC Code: 8733
- Facility Street Address: 47 MILES WEST OF IDAHO FALLS IDAHO ON
- Phone: (208) 526-9191
- Facility City: SCOVILLE (RAIL STATION)
- State/Province: IDAHO
- Zip/Postal Code: \_\_\_\_\_
- Generator USEPA/Federal ID #: ID 4890008952
- County: BUTTE
- State/Province ID #: \_\_\_\_\_
- Customer Name: RICHARD D JOHNSON
- Customer Phone: (208) 526-9191
- Customer Contact: RICHARD D JOHNSON
- Customer Fax: (208) 526-8007
- Billing Address 12100 BROWNS GULCH ROAD, BUTTE MONTANA 59701 ☐ Same as above

## B. Waste Stream Information

- Description LEAD AND
  - Name of Waste: CADMIUM CONTAMINATED SOIL
  - Process Generating Waste: CERCLA CLEAN UP OF EQUIPMENT/MATERIAL STORAGE AREA

c. Color <u>GRAY/BROWN</u>	d. Strong odor (describe): <u>N/A</u>	e. Physical state @ 70°F <input checked="" type="checkbox"/> Solid <input type="checkbox"/> Liquid <input type="checkbox"/> Gas <input type="checkbox"/> Sludge <input type="checkbox"/> Other	f. Layers <input checked="" type="checkbox"/> Single Layer <input type="checkbox"/> Multi-layer	g. Free liquid range to <u>N/A</u> % h. pH: Range to <u>N/A</u> %
-------------------------------	---	---	---	--

i. Liquid Flash Point: ☐ <73°F ☒ 73-99°F ☐ 100-139°F ☐ 140-199°F ☐ ≥ 200°F ☒ Not applicable

j. Chemical Composition (List all constituents [including halogenated organics, debris, and UHC's] present in any concentration and submit representative analysis):

Constituents	Concentration Range	Constituents	Concentration Range
LEAD AND CADMIUM CONTAMINATED SOIL (CADMIUM @ 0.5 TO 10 PPM) (LEAD @ 602 PPM) UHC - LEAD	100% WT 2		

TOTAL COMPOSITION MUST EQUAL OR EXCEED 100%

- k. ☐ Oxidizer ☒ Pyrophoric ☐ Explosive ☐ Radioactive  
☐ Carcinogen ☒ Infectious ☐ Shock Sensitive ☐ Water Reactive

l. Does the waste represented by this profile contain any of the carcinogens which require OSHA notification? (list in Section B.1.).....

☐ YES ☒ NO

m. Does the waste represented by this profile contain dioxins? (list in Section B.1.).....

☐ YES ☒ NO

n. Does the waste represented by this profile contain asbestos?.....  
If yes..... ☐ friable ☐ non-friable

☐ YES ☒ NO

o. Does the waste represented by this profile contain benzene?.....  
If yes, concentration \_\_\_\_\_ ppm

☐ YES ☒ NO

Is the waste subject to the benzene waste operations NESHAP?.....

☐ YES ☒ NO

p. Is the waste subject to RCRA Subpart CC controls?.....  
If yes, volatile organic concentration \_\_\_\_\_ ppmw

☐ YES ☒ NO

q. Does the waste contain any Class I or Class II ozone-depleting substances?.....

☐ YES ☒ NO

r. Does the waste contain debris? (list in Section B.1.).....

☐ YES ☒ NO

## 2. Quantity of Waste

Estimated Annual Volume 30-50 ☐ Tons ☒ Yards ☐ Drums ☐ Other (specify) \_\_\_\_\_

## 3. Shipping Information

### a. Packaging:

☒ Bulk Solid; Type/Size: ROLL OFFS -

☐ Bulk Liquid; Type/Size: \_\_\_\_\_

☒ Drum; Type; Size: SIZE & TYPE MAY VARY

☐ Other: \_\_\_\_\_

b. Shipping Frequency: Units 30-50 YARDS Per: ☐ Month ☐ Quarter ☒ Year ☐ One time ☐ Other

c. Is this a U.S. Department of Transportation (USDOT) Hazardous Material? (If no, skip d, e, and f)..... ☒ YES ☐ NO



# GENERATOR'S WASTE PROFILE SHEET

PLEASE PRINT IN INK OR TYPE

d. Reportable Quantity (lbs.; kgs.): DO06/ CADMIUM - 10 LBS; DO08/LEAD - 10 LBS e. Hazard Class/ID #: 9/NA3077  
f. USDOT Shipping Name: HAZARDOUS WASTE, SOLID, N.O.S.  
g. Personal Protective Equipment Requirements: \_\_\_\_\_  
h. Transporter/Transfer Station: \_\_\_\_\_

## C. Generator's Certification (Please check appropriate responses, sign, and date below.)

1. Is this a USEPA hazardous waste (40 CFR Part 261)? If the answer is no, skip to 2. ☒ YES ☐ NO
  - a. If yes, identify ALL USEPA listed and characteristic waste code numbers (D, F, K, P, U) DO06 DO08
  - b. If a characteristic hazardous waste, do underlying hazardous constituents (UHCs) apply? (If yes, list in Section B.1.) \_\_\_\_\_
  - c. Does this waste contain debris? (If yes, list size and type in Chemical Composition - B.1.) \_\_\_\_\_ ☐ YES ☒ NO
2. Is this a state hazardous waste? \_\_\_\_\_ ☐ YES ☐ NO  
Identify ALL state hazardous waste codes \_\_\_\_\_
3. Is the waste from a CERCLA (40 CFR 300, Appendix B) or state mandated clean-up? \_\_\_\_\_ ☒ YES ☐ NO  
If yes, attach Record of Decision (ROD), 104/106 or 122 order or court order that governs site clean-up activity. For state mandated clean-up, provide relevant documentation.
4. Does the waste represented by this waste profile sheet contain radioactive material, or is disposal regulated by the Nuclear Regulatory Commission? \_\_\_\_\_ ☐ YES ☒ NO
5. Does the waste represented by this waste profile sheet contain concentrations of Polychlorinated Biphenyls (PCBs) regulated by 40 CFR 761? (If yes, list in Chemical Composition - B.1.) \_\_\_\_\_ ☐ YES ☒ NO  
a. If yes, were the PCBs imported into the U.S.? \_\_\_\_\_ ☐ YES ☐ NO  
*PCB CONCENTRATION @ 1.4 PPM WHICH IS LESS THAN UHC LEVELS*
6. Do the waste profile sheet and all attachments contain true and accurate descriptions of the waste material, and has all relevant information within the possession of the Generator regarding known or suspected hazards pertaining to the waste been disclosed to the Contractor? \_\_\_\_\_ ☒ YES ☐ NO
7. Will all changes which occur in the character of the waste be identified by the Generator and disclosed to the Contractor prior to providing the waste to the Contractor? \_\_\_\_\_ ☒ YES ☐ NO

☐ Check here if a Certificate of Destruction or Disposal is required.

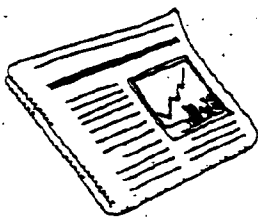
Any sample submitted is representative as defined in 40 CFR 261 - Appendix I or by using an equivalent method. I authorize WMI to obtain a sample from any waste shipment for purposes of recertification. If this certification is made by a broker, the undersigned signs as authorized agent of the generator and has confirmed the information contained in this Profile Sheet from information provided by the generator and additional information as it has determined to be reasonably necessary. If approved for management, Contractor has all the necessary permits and licenses for the waste that has been characterized and identified by this approved profile.

Certification Signature: Richard D. Dawson Title: PRIN TECH SPECIALIST  
Name (Type or Print): RICHARD D. DAWSON Company Name: B.B.W.T. Date: 6/18/01  
☐ Check if additional information is attached. Indicate the number of attached pages \_\_\_\_\_

## D. WMI Management's Decision

FOR WMI USE ONLY

1. Management Method ☐ Landfill ☐ Non-hazardous Solidification ☐ Bioremediation ☐ Incineration  
☐ Hazardous Stabilization ☐ Other (Specify) \_\_\_\_\_
2. Proposed Ultimate Management Facility: \_\_\_\_\_
3. Precautions, Special Handling Procedures, or Limitation on Approval: \_\_\_\_\_
4. Waste Form \_\_\_\_\_ 5. Source \_\_\_\_\_ 6. System Type \_\_\_\_\_  
Special Waste Decision: \_\_\_\_\_ ☐ Approved ☐ Disapproved  
Salesperson's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Division Approval Signature (Optional): \_\_\_\_\_ Date: \_\_\_\_\_  
Special Waste Approvals Person Signature: \_\_\_\_\_ Date: \_\_\_\_\_



FAX TRANSMITTAL COVER SHEET

FOR

WASTE REDUCTION OPERATIONS COMPLEX (WROC)  
(PBF BLDG PER-601)

TeleCopy Phone - 526-8007 or FTS-583-8007

To: RHONDA ROHE

From: DICK JOHNSON

Company: BBWI

Company: BBWI

Phone # 6-1048

Phone # 6-9191

Fax # 6-4373

Fax # 6-8007

Number of Pages Including Cover Sheet

4

RHONDA

HERE IS A COPY OF THE CWM PROFILE FOR YOUR  
CADMIUM CONTAMINATED SOIL THAT NEED TO GO WITH  
YOUR SAMPLE. PLEASE BE SURE TO INCLUDE A COPY  
OF YOUR CERCLA RECORD OF DECISION WITH THE PROFILE AND  
SAMPLE. ALSO, I HAVE INCLUDED A COPY OF THE SAMPLE  
LABEL THAT NEEDS TO BE AFFIXED TO THE SAMPLE.  
PLEASE FILL OUT THE INFORMATION ON THE LABEL AND  
SEND THE SAMPLE TO THE ADDRESS ON THE ATTACHED  
SHEET.

/HANKS

Dick

# Shipping a Waste Sample to CWM Arlington Facility

Rhonda

Please fill out the "Sample Label" below and attach to the one liter sample bottle or bag (whichever you decide to send). In the blank, on the sample label, where it asks for "Profile Number" put in the CWM Profile number, CD 6638.

Ship the sample to :

Attention Sample Receiving  
CWM Arlington Facility  
17629 Cedar Springs Lane  
Arlington, Oregon 97812

You also need to include a copy of the profile sheet (CD 6638) and a copy of the CERCLA Record of Decision with the sample.

If you have any questions, please call me at 6-9191 or e-mail me at RJJ. Thanks Rhonda!



Chemical Waste Management Inc.

## SAMPLE CONTAINER LABEL

GENERATOR NAME: INEEL / U S DOE

WASTE NAME: \_\_\_\_\_

PROFILE NUMBER: 498435 CD 6638

DATE SAMPLE TAKEN: \_\_\_\_\_

SAMPLER'S NAME: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

I CERTIFY THAT THIS SAMPLE IS REPRESENTATIVE AS DEFINED IN 40 CFR 261- APPENDIX 1, OR BY USING AN EQUIVALENT METHOD.

CWM-2102 (4/91)



## INTEROFFICE MEMORANDUM

**Date:** July 3, 2001

**To:** Stephen G. Wilkinson MS 3940 6-4150

**From:** Michelle M. Johnson MS 3960 6-3378

**Subject:** TRANSMITTAL OF RESULT TABLE SUMMARY REPORTS FOR SAMPLES COLLECTED IN SUPPORT OF THE CFA-10 PRE-REMEDIATION SAMPLING PROJECT

Attached are the Result Table Summary Reports containing Inorganic analyses sample results for samples generated for the CFA-10 Pre-Remediation Sampling Project.

### INORGANIC DATA

#### Lead Data

CFA-10 Pre-Remediation Sampling – Analysis Results for Inorganic Metals Data (Method Validation Level NA, table dated 07/03/2001)

CFA-10 Pre-Remediation Sampling – Analysis Results for Inorganic Metals Equip Rinsate Data (Method Validation Level NA, table dated 07/03/2001)

#### Toxicity Characteristic Leaching Procedure (TCLP) Metals Data

CFA-10 Pre-Remediation Sampling – Analysis Results for Inorganic TCLP Metals Data (Method Validation Level NA, table dated 07/03/2001)

After a review of the Sampling and Analysis Plan (SAP) Table for Chemical and Radiological Analysis pertaining to the CFA-10 Pre-Remediation, Plan Table Number CFA10-PRE, Revision 6.0, dated 04/02/2001, the following was noted:

#### Samples/Sampling Activities Planned But Not Collected

41301302LD 41301302TI

#### Samples/Sampling Activities Collected But Not Planned


None

Please review the attached tables carefully. If you have any questions, or would like any changes, please contact me at 526-3378 or Lotus Notes MJ8.

S. G. Wilkinson  
July 3, 2001  
Page 2

MMJ

Attachments

cc: Emma M. McIntosh, MS 3960/r/ARDC Files/Field Data Files  
Michelle M. Johnson File (MMJ-118-01)   
Deborah Wagoner, MS 3950  
CFA-10 Pre-Remediation Sampling Project Folder  
ISDES Project Number 000075/Packet Numbers: 01 and 02

Uniform File Code: 6404

Disposition Authority: Destroy 25 years after project completion

Retention Schedule: ENV1-k-2-b

NOTE: Original disposition authority, retention schedule, and Uniform Filing Code applied by the sender may not be appropriate for all recipients. Make adjustments as needed.

07/03/2001

**IEDMS Status of Data Packages**  
**CFA-10 PRE-REMEDIATION SAMPLING**

SDG No.	Packet No.	Analysis Type	Action Date	Action Taken
41300101LD	01	INORG (METALS)	05/03/2001	Cursory Technical Review
41300101LD	01	INORG (METALS)	05/10/2001	Received from SMO - CLH-491-01
41300101LD	01	INORG (METALS)	05/10/2001	Validation "NA" Requested
41300101LD	01	INORG (METALS)	07/03/2001	Initial Data Entry - MJ8
41300101LD	01	INORG (METALS)	07/03/2001	ERIS Upload(NA) Req - MMJ-120-01
41300101LD	01	INORG (METALS)	07/03/2001	Result Table Produced
41300101LD	01	INORG (METALS)	07/03/2001	Table to SGW - MMJ-118-01
41300101TI	02	INORG (TCLP METALS)	05/07/2001	Cursory Technical Review
41300101TI	02	INORG (TCLP METALS)	05/10/2001	Received from SMO - CLH-492-01
41300101TI	02	INORG (TCLP METALS)	05/10/2001	Validation "NA" Requested
41300101TI	02	INORG (TCLP METALS)	07/03/2001	Initial Data Entry - MJ8
41300101TI	02	INORG (TCLP METALS)	07/03/2001	ERIS Upload(NA) Req - MMJ-119-01
41300101TI	02	INORG (TCLP METALS)	07/03/2001	Result Table Produced
41300101TI	02	INORG (TCLP METALS)	07/03/2001	Table to SGW - MMJ-118-01

IEDMS Journal Sample Number Listing  
CFA-10 PRE-REMEDIATION SAMPLING

Sample No.	SDG No.	Packet No.	Analysis Type	Lab Name
41300101LD	41300101LD	01	INORG (METALS)	SWLO
41300101TI	41300101TI	02	INORG (TCLP METALS)	SWLO
41300201BE	41300101TI	02	INORG (TCLP METALS)	SWLO
41300201LD	41300101LD	01	INORG (METALS)	SWLO
41300301LD	41300101LD	01	INORG (METALS)	SWLO
41300301TI	41300101TI	02	INORG (TCLP METALS)	SWLO
41300401BE	41300101TI	02	INORG (TCLP METALS)	SWLO
41300401LD	41300101LD	01	INORG (METALS)	SWLO
41300501BE	41300101TI	02	INORG (TCLP METALS)	SWLO
41300501LD	41300101LD	01	INORG (METALS)	SWLO
41300601BE	41300101TI	02	INORG (TCLP METALS)	SWLO
41300601LD	41300101LD	01	INORG (METALS)	SWLO
41300701LD	41300101LD	01	INORG (METALS)	SWLO
41300701TI	41300101TI	02	INORG (TCLP METALS)	SWLO
41300801BE	41300101TI	02	INORG (TCLP METALS)	SWLO
41300801LD	41300101LD	01	INORG (METALS)	SWLO
41300901LD	41300101LD	01	INORG (METALS)	SWLO
41300901TI	41300101TI	02	INORG (TCLP METALS)	SWLO
41301001BE	41300101TI	02	INORG (TCLP METALS)	SWLO
41301001LD	41300101LD	01	INORG (METALS)	SWLO
41301101BE	41300101TI	02	INORG (TCLP METALS)	SWLO
41301101LD	41300101LD	01	INORG (METALS)	SWLO
41301201BE	41300101TI	02	INORG (TCLP METALS)	SWLO
41301201LD	41300101LD	01	INORG (METALS)	SWLO
41301301LD	41300101LD	01	INORG (METALS)	SWLO
41301301TI	41300101TI	02	INORG (TCLP METALS)	SWLO
41301401BE	41300101TI	02	INORG (TCLP METALS)	SWLO
41301401LD	41300101LD	01	INORG (METALS)	SWLO
41301501BE	41300101TI	02	INORG (TCLP METALS)	SWLO
41301601LD	41300101LD	01	INORG (METALS)	SWLO



IEDMS Journal Sample Table Listing  
CFA-10 PRE-REMEDIATION SAMPLING

COC No.	Sample No.	Sample Type	Collection Type	Collection Date	Depth	Area	Location
12408	4130010ILD	R	COMP	04/10/2001	0.0 - 0.5	CFA-10	SECTION 1
12408	4130010ITI	R	COMP	04/10/2001	0.0 - 0.5	CFA-10	SECTION 1
12408	4130020IBE	R	COMP	04/09/2001	1.0 - 1.2	CFA-10	SECTION 1
12408	4130020ILD	R	COMP	04/09/2001	1.0 - 1.2	CFA-10	SECTION 1
12408	4130030ILD	R	COMP	04/10/2001	0.0 - 0.5	CFA-10	SECTION 2
12408	4130030ITI	R	COMP	04/10/2001	0.0 - 0.5	CFA-10	SECTION 2
12408	4130040IBE	R	CCMP	04/09/2001	1.0 - 1.2	CFA-10	SECTION 2
12408	4130040ILD	R	CCMP	04/09/2001	1.0 - 1.2	CFA-10	SECTION 2
12408	4130050IBE	R	COMP	04/10/2001	0.0 - 0.5	CFA-10	SECTION 3
12408	4130050ILD	R	COMP	04/10/2001	0.0 - 0.5	CFA-10	SECTION 3
12408	4130060IBE	R	COMP	04/10/2001	0.0 - 0.5	CFA-10	SECTION 4
12408	4130060ILD	R	COMP	04/10/2001	0.0 - 0.5	CFA-10	SECTION 4
12408	4130070ILD	R	COMP	04/10/2001	0.0 - 0.5	CFA-10	SECTION 5
12409	4130070ITI	R	COMP	04/10/2001	0.0 - 0.5	CFA-10	SECTION 5
12409	4130080IBE	R	COMP	04/09/2001	1.0 - 1.2	CFA-10	SECTION 5
12409	4130080ILD	R	COMP	04/09/2001	1.0 - 1.2	CFA-10	SECTION 5
12409	4130090ILD	R	COMP	04/10/2001	0.0 - 0.5	CFA-10	SECTION 6
12409	4130090ITI	R	COMP	04/10/2001	0.0 - 0.5	CFA-10	SECTION 6
12409	4130100IBE	R	COMP	04/09/2001	1.0 - 1.2	CFA-10	SECTION 6
12409	4130100ILD	R	COMP	04/09/2001	1.0 - 1.2	CFA-10	SECTION 6
12410	4130110IBE	R	COMP	04/10/2001	0.0 - 0.5	CFA-10	SECTION 7
12410	4130110ILD	R	COMP	04/10/2001	0.0 - 0.5	CFA-10	SECTION 7
12410	4130120IBE	R	COMP	04/10/2001	0.0 - 0.5	CFA-10	SECTION 8
12410	4130120ILD	R	COMP	04/10/2001	0.0 - 0.5	CFA-10	SECTION 8
12410	4130130ILD	E	DUP	04/10/2001	0.0 - 0.5	CFA-10	SECTION 9
12410	4130130ITI	E	DUP	04/10/2001	0.0 - 0.5	CFA-10	SECTION 9
12410	4130140IBE	R	COMP	04/09/2001	0.0 - 0.5	CFA-10	SECTION 10
12410	4130140ILD	R	COMP	04/09/2001	0.0 - 0.5	CFA-10	SECTION 10
12410	4130150IBE	R	CORE	04/10/2001	0.0 - 0.5	CFA-10	SECTION 10
12410	4130160ILD	Q	RNST	04/10/2001	NA	CFA-10	QC

## ANALYSIS RESULTS FOR INORGANIC METALS DATA

Page 1

AREA	CFA-10	CFA-10	CFA-10	CFA-10	CFA-10	CFA-10	CFA-10	CFA-10	CFA-10
LOCATION	SECTION 1	SECTION 1	SECTION 2	SECTION 2	SECTION 2	SECTION 3	SECTION 3	SECTION 3	SECTION 3
TYPE OF LOCATION	TRANSFORMER YARD	TRANSFORMER YARD	TRANSFORMER YARD	TRANSFORMER YARD	TRANSFORMER YARD	TRANSFORMER YARD	TRANSFORMER YARD	TRANSFORMER YARD	TRANSFORMER YARD
SAMPLE NUMBER	41300101LD	41300201LD	41300301LD	41300401LD	41300501LD	41300601LD	41300701LD	41300801LD	41300901LD
MEDIA	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	L	L	L	L	L	L	L	L	L
SDG NUMBER	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
	F	F	F	F	F	F	F	F	F
DEPTH (ft)	0.0 - 0.5	1.0 - 1.2	0.0 - 0.5	1.0 - 1.2	0.0 - 0.5	1.0 - 1.2	0.0 - 0.5	1.0 - 1.2	0.0 - 0.5
ANALYTES									
Lead	3140	388 B	427	170 B	583 B				
Field/Shipping Time	1d	2d	1d	2d	1d				
*Analysis (Allowed) Hold Time	8(180)d	8(180)d	8(180)d	8(180)d	8(180)d				

a. SW Method 6010B: Inductively Coupled Plasma - Atomic Emission Spectroscopy

The LQF column contains any laboratory assigned data qualifier flags.

The VQF column contains any validator assigned data qualifier flags.

07/03/2001

CFA-10 Pre-Remediation Sampling - April 2001 - Method Validation Level NA

ANALYSIS RESULTS FOR INORGANIC METALS DATA (Continued)

Page 2

AREA	CFA-10	CFA-10	CFA-10	CFA-10	CFA-10
LOCATION	SECTION 4	SECTION 5	SECTION 5	SECTION 6	SECTION 6
TYPE OF LOCATION	TRANSFORMER YARD	TRANSFORMER YARD	TRANSFORMER YARD	TRANSFORMER YARD	TRANSFORMER YARD
SAMPLE NUMBER	41300601LD	41300701LD	41300801LD	41301001LD	41301001LD
MEDIA	SOIL L V	SOIL L V	SOIL L V	SOIL L V	SOIL L V
UNITS	MG/KG Q Q	MG/KG Q Q	MG/KG Q Q	MG/KG Q Q	MG/KG Q Q
SDG NUMBER	41300101LD	41300101LD	41300101LD	41300101LD	41300101LD
	F F	F F	F F	F F	F F

DEPTH (ft)

0.0 - 0.5

0.0 - 0.5

1.0 - 1.2

0.0 - 0.5

1.0 - 1.2

ANALYTES

Lead

1960

9260

1540

1770

184

Field/Shipping Time  
\* Analysis (Allowed) Hold Time

1d  
8(180)d

1d  
8(180)d

2d  
8(180)d

1d  
8(180)d

2d  
9(180)d

a. SW Method 80108: Inductively Coupled Plasma - Atomic Emission Spectroscopy

The LQF column contains any laboratory assigned data qualifier flags.  
The VQF column contains any validator assigned data qualifier flags.

07/03/2001

CFA-10 Pre-Remediation Sampling - April 2001 - Method Validation Level NA

ANALYSIS RESULTS FOR INORGANIC METALS DATA (Continued)

Page 3

AREA	CFA-10	CFA-10	CFA-10	CFA-10	CFA-10
LOCATION	SECTION 7	SECTION 8	SECTION 9	SECTION 10	
TYPE OF LOCATION	TRANSFORMER YARD	TRANSFORMER YARD	TRANSFORMER YARD	TRANSFORMER YARD	
SAMPLE NUMBER	41301101LD	41301201LD	41301301LD	41301401LD	
MEDIA	SOIL L V	SOIL L V	SOIL L V	SOIL L V	
UNITS	MG/KG Q Q	MG/KG Q Q	MG/KG Q Q	MG/KG Q Q	
SDG NUMBER	41300101LD F F	41300101LD F F	41300101LD F F	41300101LD F F	

DEPTH (m) 0.0 - 0.5 0.0 - 0.5 0.0 - 0.5 0.0 - 0.5 0.0 - 0.5

ANALYTES  
Lead 907 B 639 B 1610 143 B

Field/Shipping Time 1d 1d 1d 2d  
\* Analysis (Allowed) Hold Time 8(180)d 8(180)d 8(180)d 9(180)d

a. SW Method 6010B: Inductively Coupled Plasma - Atomic Emission Spectroscopy

The LQF column contains any laboratory assigned data qualifier flags.  
The VQF column contains any validator assigned data qualifier flags.

07/03/2001

## ANALYSIS RESULTS FOR INORGANIC METALS EQUIP RINSATE DATA

AREA	CFA-10
LOCATION	QC
TYPE OF LOCATION	EQUIP RINSATE
SAMPLE NUMBER	41301801LD
MEDIA	SOIL L V
UNITS	UG/L Q Q
SDG NUMBER	41300101LD F F

DEPTH (ft)	NA
------------	----

ANALYTES	
Lead	12.1 B

Field/Shipping Time	1d
---------------------	----

*Analysis (Allowed) Hold Time	3(180)d
-------------------------------	---------

a. SW Method 8010B: Inductively Coupled Plasma - Atomic Emission Spectroscopy

The LQF column contains any laboratory assigned data qualifier flags.  
The VQF column contains any validator assigned data qualifier flags.

07/03/2001

## ANALYSIS RESULTS FOR INORGANIC TCLP METALS DATA

Page 1

AREA	CFA-10	CFA-10	CFA-10	CFA-10	CFA-10	CFA-10	CFA-10	CFA-10	CFA-10
LOCATION	SECTION 1	SECTION 2	SECTION 2	SECTION 2	SECTION 2	SECTION 2	SECTION 2	SECTION 2	SECTION 3
TYPE OF LOCATION	TRANSFORM YARD	TRANSFORM YARD	TRANSFORM YARD	TRANSFORM YARD	TRANSFORM YARD	TRANSFORM YARD	TRANSFORM YARD	TRANSFORM YARD	TRANSFORM YARD
SAMPLE NUMBER	41300101TI	41300201BE	41300301TI	41300401BE	41300501BE	41300601BE	41300701BE	41300801BE	41300901BE
MEDIA	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	L V	L V	L V	L V	L V	L V	L V	L V	L V
SPQ NUMBER	41300101TI	41300101TI	41300101TI	41300101TI	41300101TI	41300101TI	41300101TI	41300101TI	41300101TI
DEPTH (ft)	0.0 - 0.5	1.0 - 1.2	0.0 - 0.5	1.0 - 1.2	0.0 - 0.5	1.0 - 1.2	0.0 - 0.5	1.0 - 1.2	0.0 - 0.5
ANALYTES									
Cadmium	27.8 B		17.5 B						
Chromium	4.0 B		3.2 B						
Lead	444	1.2 U	317						
Field/Shipping Time	1d	2d	1d						
* Extraction (Allowed) Hold Time	2(180)d	3(180)d	2(180)d						
* Analysis (Allowed) Hold Time	5(180)d	5(180)d	5(180)d						

a. SW Method 6010B: Inductively Coupled Plasma - Atomic Emission Spectroscopy

The LOF column contains any laboratory assigned data qualifier flags.

The VQF column contains any validator assigned data qualifier flags.

07/03/2001

## ANALYSIS RESULTS FOR INORGANIC TOLP METALS DATA (Continued)

AREA	CFA-10	CFA-10	CFA-10	CFA-10	CFA-10	CFA-10
LOCATION	SECTION 4	SECTION 5	SECTION 5	SECTION 5	SECTION 6	SECTION 6
TYPE OF LOCATION	TRANSFORM YARD	TRANSFORM YARD	TRANSFORM YARD	TRANSFORM YARD	TRANSFORM YARD	TRANSFORM YARD
SAMPLE NUMBER	41300801BE	41300701TI	41300801BE	41300801TI	41300801TI	41301001BE
MEDIA	SOIL L V	SOIL L V	SOIL L V	SOIL L V	SOIL L V	SOIL L V
UNITS	UG/L Q F	UG/L Q F	UG/L Q F	UG/L Q F	UG/L Q F	UG/L Q F
SDG NUMBER	41300101TI	41300101TI	41300101TI	41300101TI	41300101TI	41300101TI
DEPTH (ft)	0.0 - 0.5	0.0 - 0.5	1.0 - 1.2	0.0 - 0.5	0.0 - 0.5	1.0 - 1.2
ANALYTES						
Cadmium		4190			14.9 B	
Chromium		2.4 B			1.7 B	
Lead	36.3 B	2810	128 B		938	1.8 B
Field/Shipping Time	1d	1d	2d		1d	2d
*Extraction (Allowed) Hold Time	2(180)d	2(180)d	3(180)d		2(180)d	3(180)d
*Analysis (Allowed) Hold Time	5(180)d	5(180)d	5(180)d		5(180)d	5(180)d

a. SW Method 6010B: Inductively Coupled Plasma - Atomic Emission Spectroscopy

The LQF column contains any laboratory assigned data qualifier flags.

The VQF column contains any validator assigned data qualifier flags.

07/03/2001

## ANALYSIS RESULTS FOR INORGANIC TCLP METALS DATA (Continued)

AREA	CFA-10	CFA-10	CFA-10	CFA-10	CFA-10	CFA-10	CFA-10	CFA-10	CFA-10
LOCATION	SECTION 7	SECTION 8	SECTION 9	SECTION 10	SECTION 10	SECTION 10	SECTION 10	SECTION 10	SECTION 10
TYPE OF LOCATION	TRANSFORMER YARD	TRANSFORMER YARD	TRANSFORMER YARD	TRANSFORMER YARD	TRANSFORMER YARD	TRANSFORMER YARD	TRANSFORMER YARD	TRANSFORMER YARD	TRANSFORMER YARD
SAMPLE NUMBER	41301101BE	41301201BE	41301301TI	41301401BE	41301501BE	41301601BE	41301701BE	41301801BE	41301901BE
MEDIA	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	L	L	L	L	L	L	L	L	L
SDG NUMBER	41300101TI	41300101TI	41300101TI	41300101TI	41300101TI	41300101TI	41300101TI	41300101TI	41300101TI
DEPTH (ft)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
ANALYTES									
Cadmium									
Chromium									
Lead	16.4 B	35.5 B	178 B	3.4 B	1.2 U				
Field/Shipping Time	1d	1d	1d	2d	1d				
* Extraction (Allowed) Hold Time	2(180)d	2(180)d	2(180)d	3(180)d	2(180)d				
* Analysis (Allowed) Hold Time	5(180)d	5(180)d	5(180)d	5(180)d	5(180)d				

a. SW Method 8010B: Inductively Coupled Plasma - Atomic Emission Spectroscopy

The LQF column contains any laboratory assigned data qualifier flags.

The VQF column contains any validator assigned data qualifier flags.

07/03/2001



Pre-remediation Sampling Results (Sample delivery groups 41300101LD and 41300101TI)

Section	Total Pb 0-6" (mg/kg)	Pb TCLP 0-6" (mg/L)	Cd TCLP 0-6" (mg/L)	Pb TCLP 6-12" (mg/L)	Cd TCLP 6-12" (mg/L)	Total Pb 12-15" (mg/kg)	Pb TCLP 12-15" (mg/L)	Cd TCLP 12-15" (mg/L)	Pb TCLP 12-18" (mg/L)	Cd TCLP 12-18" (mg/L)
1	3140.00	0.4440	0.0278	0.0012	0.0040	386.00	0.0120	0.0000		
2	427.00	0.3170	0.0175			170.00	0.0190	0.0000		
3	583.00	0.0820	0.0000							
4	1960.00	0.0360	0.0000							
5	9260.00	2.8100	4.1900	0.0125	0.0072	1540.00	0.1260	0.0000	0.0018	0.0029
6	1770.00	0.1260	0.0000			184.00	0.0180	0.0000		
7	907.00	0.0164	0.0000							
8	639.00	0.0355	0.0000							
9	1610.00	0.1780	0.0222							
10(concrete)	143.00									

Post-remediation Confirmation Sampling (sample delivery groups 41312101UC, 41311801LD, and 41311901LD)

Sample Point	Total Pb (mg/kg)	TCLP Pb (mg/L)	TCLP Cd (mg/L)
1	298		
2	12.4		
3	31.1		
4	18.3, 18.5		
5	66.1		
6	28.9		
7	53.7		
8	158		
9	54.2		
10	34.1		
11	TBD	0.0012	0.0013
12	14.8		
13	9.7, 10.9		
14	95.3		
15	37.5		0.0115
16	14.1		
17	16.5		
18	57.7		
19	19.6		
20	129		

Date: 07/03/2001  
Time: 14:53:22

## INORGANIC ANALYSIS

SDG Number: 41300101LD

Total Samples: 15

SDG Number	Sample Number	Sample ID Number	Analysis	Number of Result Records
41300101LD	41300101LD - LD	46221.01	INORG (METALS)	1
41300101LD	41300201LD - LD	46221.02	INORG (METALS)	1
41300101LD	41300301LD - LD	46221.03	INORG (METALS)	1
41300101LD	41300401LD - LD	46221.04	INORG (METALS)	1
41300101LD	41300501LD - LD	46221.05	INORG (METALS)	1
41300101LD	41300601LD - LD	46221.06	INORG (METALS)	1
41300101LD	41300701LD - LD	46221.07	INORG (METALS)	1
41300101LD	41300801LD - LD	46221.08	INORG (METALS)	1
41300101LD	41300901LD - LD	46221.09	INORG (METALS)	1
41300101LD	41301001LD - LD	46221.10	INORG (METALS)	1
41300101LD	41301101LD - LD	46221.11	INORG (METALS)	1
41300101LD	41301201LD - LD	46221.12	INORG (METALS)	1
41300101LD	41301301LD - LD	46221.13	INORG (METALS)	1
41300101LD	41301401LD - LD	46221.14	INORG (METALS)	1
41300101LD	41301601LD - LD	46221.17	INORG (METALS)	1

Total Header Records: 15

Total Result Records: 15



## INTEROFFICE MEMORANDUM

**Date:** July 3, 2001

**To:** Anita D. Litteer MS 2603 6-9357

**From:** Michelle M. Johnson *MMJ* MS 3960 6-3378

**Subject:** INTEGRATED ENVIRONMENTAL DATA MANAGEMENT SYSTEM (IEDMS)  
INORGANIC RECORDS TRANSFER OF DATA TO THE ENVIRONMENTAL  
RESTORATION INFORMATION SYSTEM (ERIS) FOR DATA PERTAINING  
TO CFA-10 PRE-REMEDIATION SAMPLING – SAMPLE DELIVERY GROUP  
NUMBER 41300101LD

**References:** Corey L. Harris letter to Michelle M. Johnson, CLH-491-01, Transmittal of Data for  
the CFA-10 Pre-Remediation Sampling Project, Sample Delivery Group Number  
41300101LD, May 10, 2001

The attached listing of Lead data records (Method Validation Level NA) is ready for upload to ERIS and is located at N:\ERP\ERIS\_UPLOAD\MMJ-2001\MMJ-120. Use charge number 3XCC22T12.

Please let me know when this information has been uploaded to ERIS by dating, signing, and returning a copy of this letter to me. If you have any questions, please call me at 6-3378 or Lotus Notes MJ8.

Uploaded to ERIS on: \_\_\_\_\_ By: \_\_\_\_\_

MMJ

### Attachment

cc: Emma M. McIntosh, MS 3960/r/Field Data Files  
ARDC (signed copy), MS 3910  
Michelle M. Johnson File (MMJ-120-01) *MMJ*  
Deborah Wagoner, MS 3950  
Steve Wilkinson, MS 3922  
CFA-10 Pre-Remediation Sampling Project Folder  
ISDES Project Number 000075/Package Number: 01

*Completed  
on 7/17/01*

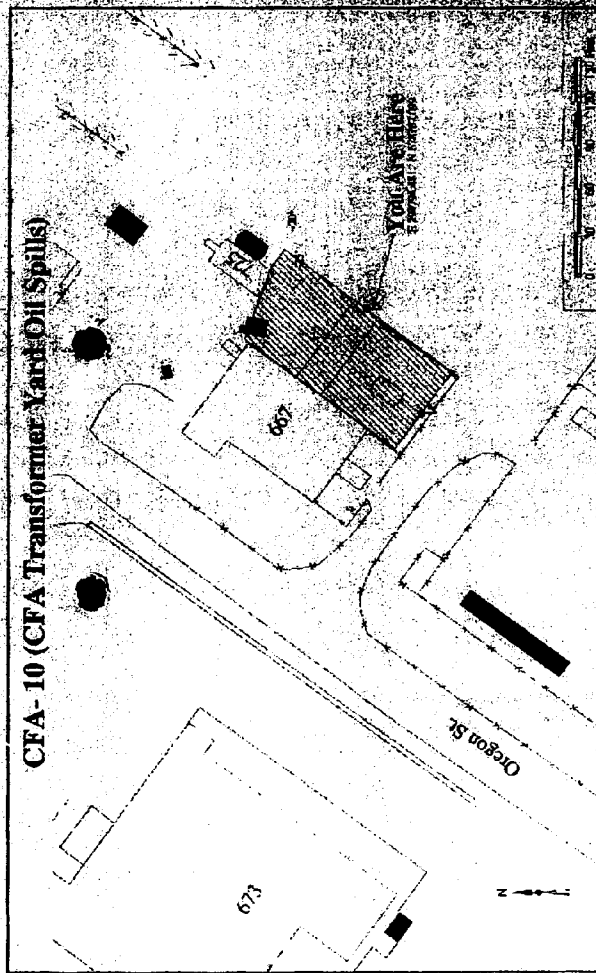
Uniform File Code: 6404

Disposition Authority: Destroy 25 years after project completion

Retention Schedule: ENV1-k-2-b

NOTE: Original disposition authority, retention schedule, and Uniform Filing Code applied by the sender may not be appropriate for all recipients. Make adjustments as needed.

# Site To Be Remediated



## Contaminant of

### Concern

Lead

### Access Requires

STD-101 Training  
POD for Access

### Waste Handling

#### Concerns

Before generating waste  
contact CFA Waste  
Generator Services

## Contaminated

### Media

Soil

**Before disturbing this area, call  
Environmental Restoration at 526-1515**

CFA-10 Institutional Controls sign, which was removed following remedial action.



## Department of Energy

Idaho Operations Office  
850 Energy Drive  
Idaho Falls, Idaho 83401-1563

October 18, 2001

Mr. Wayne Pierre, Team Leader  
Environmental Cleanup Office  
U.S. Environmental Protection Agency  
Region X  
1200 Sixth Avenue  
Seattle, Washington 98101

Mr. Dean Nygard, Site Remediation Manager  
Waste Management and Remediation Division  
Idaho Department Environmental Quality  
1410 N. Hilton  
Boise, Idaho 83706

SUBJECT: Transmittal of CFA-10 Transformer Yard L&V Reports - (EM-ER-01-171)

Dear Mr. Pierre & Mr. Nygard:

Per the *Federal Facility Agreement and Consent Order* Section XIX, 19.1, this letter transmits the quality-assured results of post-remediation sampling at the Central Facilities Area (CFA)-10 Transformer Yard within 120 days of sample collection.

The summary report of results is included as Enclosure 1. Enclosures 2, 3, and 4 are the limitations and validation reports. All data show that the Transformer Yard has been remediated to below the clean-up goal of 400 mg/kg lead (Environmental Protection Agency residential screening level).

If you have any questions or need for further information please contact Carol Hathaway at 208-526-4049 or myself at 208-526-4392.

Sincerely,

*Kathleen E. Hain*

Kathleen E. Hain, Manager  
Environmental Restoration

Enclosure

cc: K. Ivy, EPA, 1200 Sixth Avenue, Seattle, WA 98101, 3 copies  
C. Cody, IDHW DEQ, 3 copies

ARDC



## Department of Energy

Idaho Operations Office  
850 Energy Drive  
Idaho Falls, Idaho 83401-1563

November 16, 2001

Mr. Wayne Pierre, Team Leader  
Environmental Cleanup Office  
U.S. Environmental Protection Agency  
Region X  
1200 Sixth Avenue  
Seattle, Washington 98101

Mr. Dean Nygard, Site Remediation Manager  
Waste Management and Remediation Division  
Idaho Department Environmental Quality  
1410 N. Hilton  
Boise, Idaho 83706

SUBJECT: TRANSMITTAL OF THE CFA -10 TRANSFORMER YARD FINAL INSPECTION  
DOCUMENTATION (EM-ER-01-187)

Dear Mr. Pierre & Mr. Nygard:

This letter provides the final documentation for close-out of the Central Facilities Area (CFA)-10 Transformer Yard final inspection.

Attached are the certificates of disposal for CFA-10 hazardous waste, which was sent to Arlington, Oregon for treatment and disposal. Also attached are current pictures of the transformer site after remediation.

If you have any questions or need for further information please contact Carol Hathaway at 208-526-4049 or myself at 208-526-4392.

Sincerely,

A handwritten signature in cursive script that reads "Carol A. Hathaway".

Carol A. Hathaway  
Environmental Protection Specialist

Cc/enc: K. Ivy, EPA, 1200 Sixth Avenue, Seattle, WA 98101  
C. Cody, IDHW DEQ

ENCLOSURE

**Appendix E**  
**Certificate(s) of Disposal**







CWM OF THE NORTHWEST  
Federal EPA ID: ORD089452353  
17629 CEDAR SPRINGS LANE  
ARLINGTON, OR 97812

IDAHO NATIONAL ENGINEERING LAB  
ATTN: MANIFEST SECTION  
ID4890008952  
42 MI W IDAHO FALLS ON HWY 20  
IDAHO FALLS ID 83415-0001

CERTIFICATE OF DISPOSAL  
-----

Chemical Waste Management, Inc. has received waste material from  
IDAHO NATIONAL ENGINEERING LAB on 08/21/01 as described on [State  
Manifest or Uniform] Hazardous Waste Manifest number 01721.

Profile Number: CD6638  
CWM Tracking ID: 35938001  
Process: LANDFILL  
Treatment Date: 08/22/01

I certify, on behalf of the above listed treatment facility, that to  
the best of my knowledge, the above-described waste was managed in  
compliance with all applicable laws, regulations, permits and  
licenses on the date listed above.

A handwritten signature in cursive script, appearing to read 'Lynn Morrill', written over a horizontal line.

LYNN MORRILL  
RECORDS MANAGER  
Certificate # 91430  
08/29/01



CWM OF THE NORTHWEST  
Federal EPA ID: ORD089452353  
17629 CEDAR SPRINGS LANE  
ARLINGTON, OR 97812

IDAHO NATIONAL ENGINEERING LAB  
ATTN: MANIFEST SECTION  
ID4890008952  
42 MI W IDAHO FALLS ON HWY 20  
IDAHO FALLS ID 83415-0001

CERTIFICATE OF DISPOSAL  
-----

Chemical Waste Management, Inc. has received waste material from  
IDAHO NATIONAL ENGINEERING LAB on 07/10/01 as described on (State  
Manifest or Uniform) Hazardous Waste Manifest number 01688.

Profile Number: CD6638  
CWM Tracking ID: 35867601  
Process: LANDFILL  
Treatment Date: 07/11/01

I certify, on behalf of the above listed treatment facility, that to  
the best of my knowledge, the above-described waste was managed in  
compliance with all applicable laws, regulations, permits and  
licenses on the date listed above.

A handwritten signature in cursive script, appearing to read 'Lynn Murrill', written over a horizontal line.

LYNN MURRILL  
RECORDS MANAGER  
Certificate # 90116  
07/18/01

## **Appendix F**

### **X-Ray Fluorescence Survey of CFA-010 Transformer Yard for Lead (Pb) in Surface Soil Comparison of Field and Laboratory Analysis**

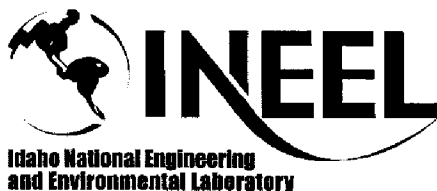


## Engineering Design File

Operable Unit 4-13  
DE-AC07-99ID13727

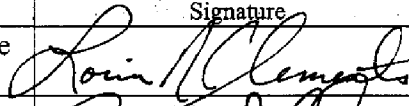

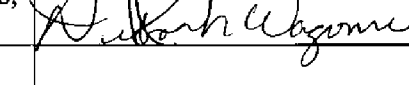
### **X-Ray Fluorescence Survey of CFA-010 Transformer Yard for Lead (Pb) in Surface Soil Comparison of Field and Laboratory Analysis**

[The following statement is optional:  
Prepared for:  
U.S. Department of Energy  
Idaho Operations Office  
Idaho Falls, Idaho]



Form 412.14  
07/24/2001  
Rev. 03

ENGINEERING DESIGN FILE

1. Project File No.: NA	2. Project/Task:	XRF Survey of WAG 4 OU-CF-10	
3. Subtask: NA			
4. Title: X-Ray Fluorescence Survey of CFA-010 Transformer Yard for Lead (Pb) in Surface Soil Comparison of Field and Laboratory Analysis.			
5. Summary:			
<p>Portage Environmental performed a survey of the Transformer Yard utilizing a Niton X-Ray Fluorescence (XRF) instrument. The survey was performed in April 2001. The initial XRF survey design was documented in the "Field Sampling Plan for the Idaho National Engineering and Environmental Laboratory Central Facilities Area, Operable Unit 4-13, Transformer Yard CFA-10" (10/13/2000 Draft). This plan called for collecting sample soils from 3 locations and making one composite sample. This was completed for 0 to 6-in. depths in 10 sections of the yard. Four sections also had samples taken at depths of 12 to 15 inches. Additionally, a swipe survey of the building CFA-667 roof was performed along the eaves of the building to determine if there was removable lead particulate on the roof. The procedure used to perform the wipe survey was developed from the Niton Corporation XL-309 &amp; 700 Series User's Guide Version 5.0, Chapter 4, "Analyzing Thin Samples." Results of these efforts are presented in this EDF.</p>			
6. Distribution (complete package): D.J. Wagoner/Wiggins, MS 3953;  Distribution (summary package only):NA			
7. Review (R) and Approval (A) Signatures: (Minimum reviews and approvals are listed. Additional reviews/approvals may be added.)			
	R/A	Typed Name/Organization	Signature
Performer	R	Lorin N Clements, Portage Environmental	 6/12/01
Independent Reviewer	R	Cliff Watkins, Portage Environmental	 6/12/01
Requestor	A	Deborah Wagoner/Wiggins, BBWI WAG4	 6/13/01
Approver	A		

## Contents

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	4.3 References.....	8
Appendix A – XRF Survey Data		

## Acronyms

CFA	Central Facilities Area
OU	operable unit
FRG	final remediation goal
RI/FS	Remedial Investigation/Feasibility Study
RESL	Radiological and Environmental Sciences Laboratory
TCLP	Toxicity Characterization Leaching Procedure
WAG	waste area group
XRF	X-Ray Fluorescence



## 1 Introduction

The X-ray fluorescence (XRF) survey was performed at the waste area group (WAG) 4 operable unit (OU) 4-13, building CFA-667, Transformer Yard, as part of an effort to guide the excavation of soils, determine proper disposition of excavated materials, and verify that remaining soils do not exceed the final remediation goal (FRG) of 400 mg/kg. The roof surveys were taken to determine if the building was an ongoing source of contamination to the ground. During the activities documented in the Comprehensive Remedial Investigation/Feasibility Study (RI/FS) for the Central Facilities Area (CFA)<sup>1</sup>, 13 samples were collected from the yard in four locations to determine the potential for hazardous constituents at various depths and, if present, their concentrations. These samples were taken to represent depths of 0 to 0.5, 1.0, and 2.0 ft at each location. Figure 3-5 of the RI/FS report identifies the estimated locations of the samples. Additional analytical data collected during 1997 and 1998 (a total of eight [8] locations) indicate that the surface soils from 0 to 0.5 ft (0 to 0.15 m) below the grade surface have lead concentrations ranging from 16.5 to 5,560 mg/kg. It was postulated in the RI/FS report that the full extent of contamination would possibly be greater than just the sample locations because no specific pattern of welding activities or waste disposal of scrap lead in the yard could be identified. Several thousand surface readings were obtained in October of 2000 by in situ XRF surface soil evaluation<sup>2</sup>. That survey identified areas of higher concentrations of lead in areas not suspected to be contaminated based on earlier sampling. The sampling activities reported in this correspondence were performed to obtain a more comprehensive evaluation of the site by laboratory and field analysis of additional samples.

The WAG 4 manager contracted (Contract K00-583020, Task No. 28—XRF Survey<sup>3</sup>) Portage Environmental, Inc., to perform additional evaluation of soil samples that were counted in the field and in an analytical laboratory for comparison purposes. These samples were to be field evaluated using EPA Method 6200, *Field Portable X-Ray Fluorescence Spectrometry for the Determination of Elemental Concentrations In Soil and Sediment*<sup>4</sup>. The thin wipes from the roof were to be evaluated per Chapter 4 of the users guide for Niton Corporation's XRF XL-309 and 700 series instruments<sup>5</sup>.

## 2 Data Quality Objectives

The data quality objectives (DQOs) established in the survey plan addressed the following decision statements.

- Determine whether soils exceed the FRG of 400 mg/kg and require excavation
- Determine whether the concrete pad and soils exceed the Toxicity Characterization Leaching Procedure (TCLP) limit of 5 mg/L for lead and require stabilization and disposition to an offsite Treatment, Storage, and Disposal Facility or do not exceed TCLP limit for lead of 5 mg/L and can be disposed at the CFA landfill
- Determine whether soils remaining after remediation is done will meet the FRG of 400 mg/kg and support site closure
- Determine if the building roof was an ongoing source of contamination for the yard.

### 3 Field Methods

#### 3.1 Dust Wipes

Dust wiping was performed, and all wiping was done using dry paper wipes. Locations wiped included:

- 20 dust wipes were taken from the roof of Building CFA-667: 10 wipes were taken from each roof slope side of the building (wipes were taken along the eave of the building and within each 10-ft length of the building at random intervals) Each wipe was numbered.
- 10 additional numbered wipes were requested to be taken in the building: random locations on the building walls were sampled, with each wall sampled at least once.

No solvents or waters were used to increase removal effectiveness. There is no EPA approved method for performing dust wipe analysis using XRF. However, the techniques of Chapter 4 of the Niton's user guide were followed. The following technique was used to determining lead quantities on the wipes.

A laboratory performance evaluation soil sample, with a known concentration of lead, was obtained from the Radiological and Environmental Sciences Laboratory (RESL). This soil (RESL 95-S2) was analyzed by 37 laboratories and had a reported concentration from 238 to 329 mg/kg. The 95% confidence interval for the mean for this sample was 270 to 293 mg/kg. A "wipe standard" was developed by putting 0.5 grams of this soil in the middle of a numbered once folded wipe, spreading the soil uniformly in a 2.5 by 5 cm square, and then folding the wipe four more times. The final fold made an approximate 2.5 by 5 cm rectangle. This wipe was analyzed four times using a Niton 700XL multi-element analyzer. The analyses were sequential down the length of the wipe. This covered the major regions of the wipes for lead detection. The four readings were totaled to make one count. The standard was counted five times in this manner, three times from the numbered side, twice from the unnumbered side. The "wipe standard" had approximately 0.140 mg of lead. The average of five counts on the prepared wipe was 83 ppm. Appendix A contains Table 1 that shows counting results for all wipes. Each wipe was also counted four times.

#### 3.2 Transformer Yard

Soil samples were obtained from the transformer yard according to the field sampling plan<sup>6</sup>. The sample points were marked using Global Positioning System techniques. In situ surface counts were made using the XRF Niton 703 analyzer with the capabilities to detect lead and 14 elements in the soils. A laboratory performance evaluation soil sample, with a known concentration of lead, was obtained from RESL. This soil (RESL 95-S2) was analyzed by 37 laboratories and had a reported concentration from 238 to 329 mg/kg. The 95% confidence interval for the mean for this sample was 270 to 293 mg/kg. This soil was used as a standard for instrument evaluation and operational check. The standard was used to check initial calibration (automatically performed by the instrument during initialization) and to confirm instrument performance after, approximately, every 20 field readings.

Soil sampling began on April 9, 2001. The transformer yard was divided into 10 sections based on the findings of the surface survey performed in October of 2000. Three sample points were identified in each section. A 3-in. auger core sampler was used to obtain surface to 6 and 12 to 15-in soil depth sample

cores. These cores were combined in a bowl. Sifting was performed to remove all rocks and debris larger than 1/8 inch. The remaining soils were mixed and then placed into jars and bags. The jars were sent to the laboratory for analysis. The bagged soils were counted with the portable XRF unit. On April 9, the samples were taken from 0-3 in. depth according to the field sampling plan<sup>6</sup>. However, the labels on the bottles were incorrectly identified as being from 0 to 6 inches. When this was noticed, the corrections were made and sampling was repeated on April 10. The April 10 samples were taken from 0 to 6 inches. The 0 to 3-in laboratory samples were returned to the transformer yard. However, the 0 to 3-in. bagged soils were retained for counting.

The bagged soils were counted three times with the XRF in the laboratory at CFA-620. Then the samples were removed from the bags, placed in aluminum tart trays, and weighed. After weighing, the 0 to 3 and 12 to 15-in. samples were air dried under the laboratory's ventilation hoods. The 0 to 6-in. samples were dried in the autoclave oven. After drying, the soils were sieved with a combination sieve set. The combination used was a 60 mm, 200 mm and 250 micrometer shaker set. The small rocks retained above the 60 mm screen were discarded and not counted. The material that went thru the remaining screens was put in soil cups: one cup each for the 200 mm and 250 micrometer soils. Table 2 of Appendix A displays the results of the analysis for each sample.

## 4 Summary

### 4.1 Roof Sampling

The east side, west side, and interior wipes were individually evaluated. Each wipe was analyzed four times; these analyses were totaled for each wipe. Two wipes from the east side had detectable lead on them. These wipes were taken from the rain gutters above the south side of the machine door and above the north personnel door. Wipe E-5 exhibited 21.6 ppm and E-10 exhibited 43.9 ppm lead. One wipe on the west side midway through the building at W-5 exhibited 24 ppm of lead. Compared to the "wipe standard" these are, respectively, 0.036mg/ft<sup>2</sup>, 0.074 mg/ft<sup>2</sup>, and 0.040 mg/ft<sup>2</sup>. On each of these wipes only one analysis of the four was above the limit of detection. All other wipe analyzes were less than the detectable limits of the instrument. The surface of the roof does not have residual lead contamination that would contaminate surface soils above the remediation goal.

The interior of the building is contaminated with surface lead. Ten wipes were taken from the building interior. The lead totals ranged from 102.6 to 1571 ppm. The lowest lead levels were found on the west wall in the north bay above the rigging gear (wipe taken only on the vertical wall surface). The highest lead level was found on the east wall in the north bay on both the girder and the vertical wall. Contamination in the building ranged from 0.17 to 2.65mg/ft<sup>2</sup> when compared to the "wipe standard". (Subsequent sampling outside the scope of this report was conducted on the building interior.)

### 4.2 Transformer Yard

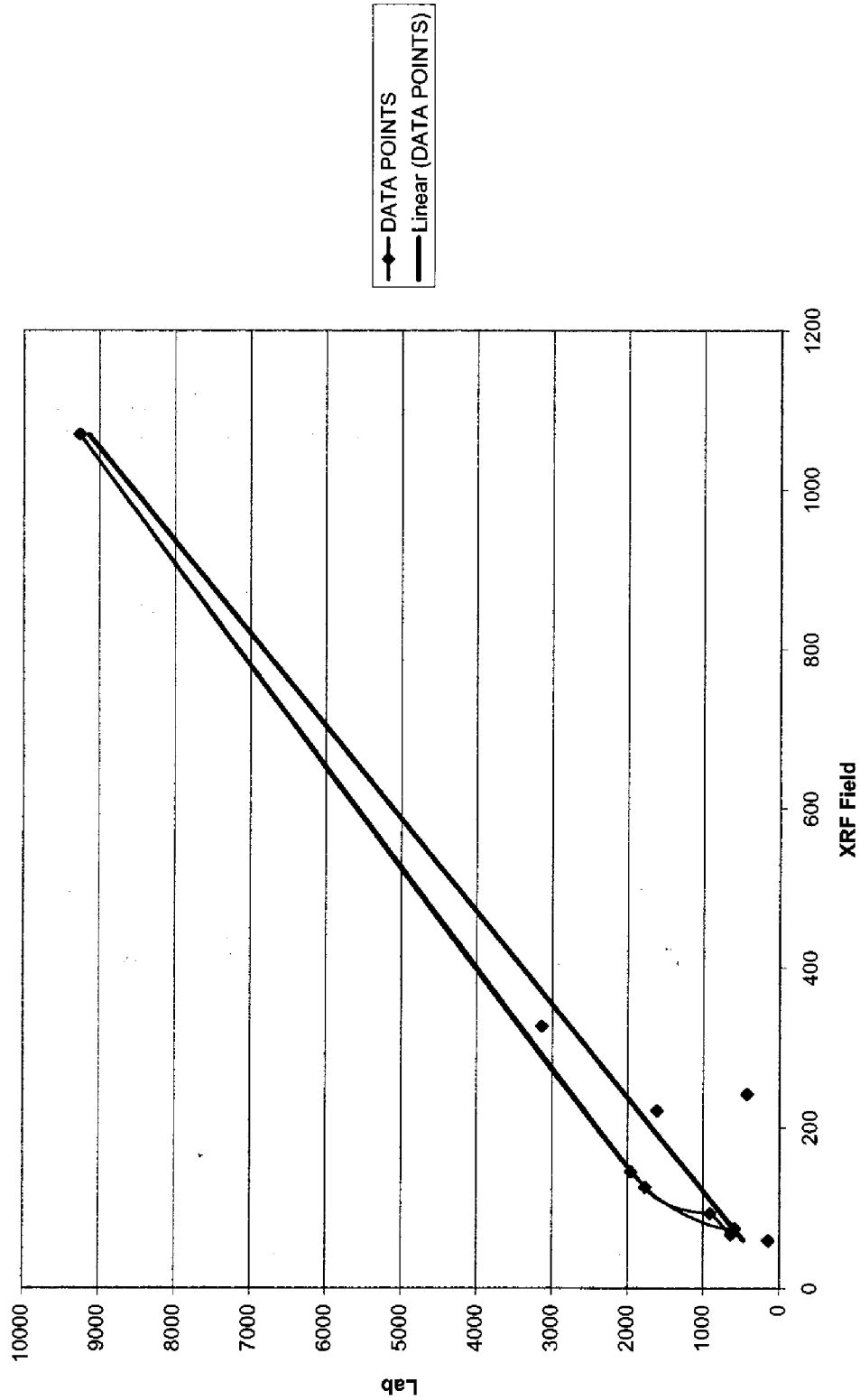
The laboratory analysis is significantly higher than the field analysis (by a factor of 1.8 to 14.1 times). Table 3 shows the results for the 0 to 6 and 12 to 15-in. samples. There are several reasons that possibly resulted in the variation in sample counting. Foremost are the differences in sample preparation. The laboratory sample preparation does not include the sieving process. Larger particles of lead, which were captured with the laboratory samples, could have been sieved from the field samples. Under these circumstances, where "similar" soils rather than the "same" soils are being analyzed, it would be expected that the laboratory and field results would vary. Additionally, the laboratory's acid digestion techniques

also have a significant bearing on analytical results. The correlation ranged from a factor of 1.8 to a factor of 14.1. However, it is evident that both the laboratory and field data exhibit the same trend, (i.e. the bias in the results is always in the same direction) though the correlation is not tight at high values. Charts 1 and 2 identify the relative differences in the samples (Chart 1) and the trend of the values in relationship to one another (Chart 2 with the x-axis as XRF values and y-axis as Lab values.).

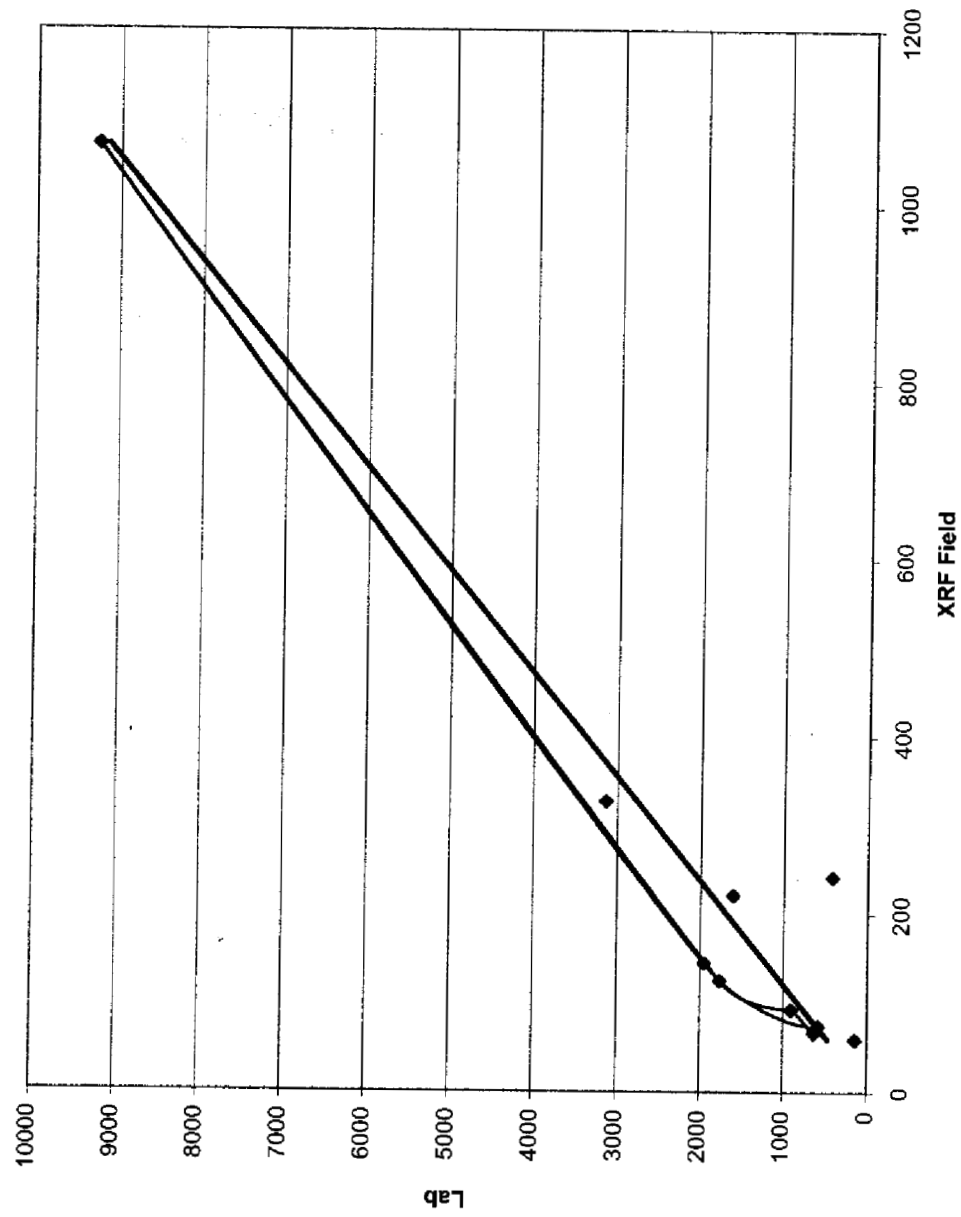
In summary, the field analysis results ranged from 7 to 56% lower than laboratory analytical results. The acid digestion process dissolves all available lead in a given mass of sample. The XRF can only detect lead that is not shielded from initial gamma radiation or where decay x-rays are not shielded due to particle size (i.e. on the surface of the particle being measured). It is recommended that the laboratory and field sampling processes are made similar with regard to the "final" sample. For accuracy, it is recommended that all samples be analyzed after the final soil sieve. The hold time for lead is six months and there are no volatility holding time issues, so the sample could easily be prepared and tested at the Idaho National Engineering and Environmental Laboratory and then forwarded to the laboratory for evaluation. In lieu of sample consistency, it is recommended to continue to use the XRF instrument with a correction factor of 10. The XRF could continue to be used as a field screening tool to provide an onsite determination to determine if excavation is sufficient to remove field detectable lead. It should be noted that when the instrument shows that the concentration of lead in the soil is less than detectable, with an error lower than 50, that the level of laboratory analysis was less than the FRG and also less than the TCLP limits of 5.

The XRF methods used did not provide sufficiently consistent data to be used for more than a screening device when testing similar soils.

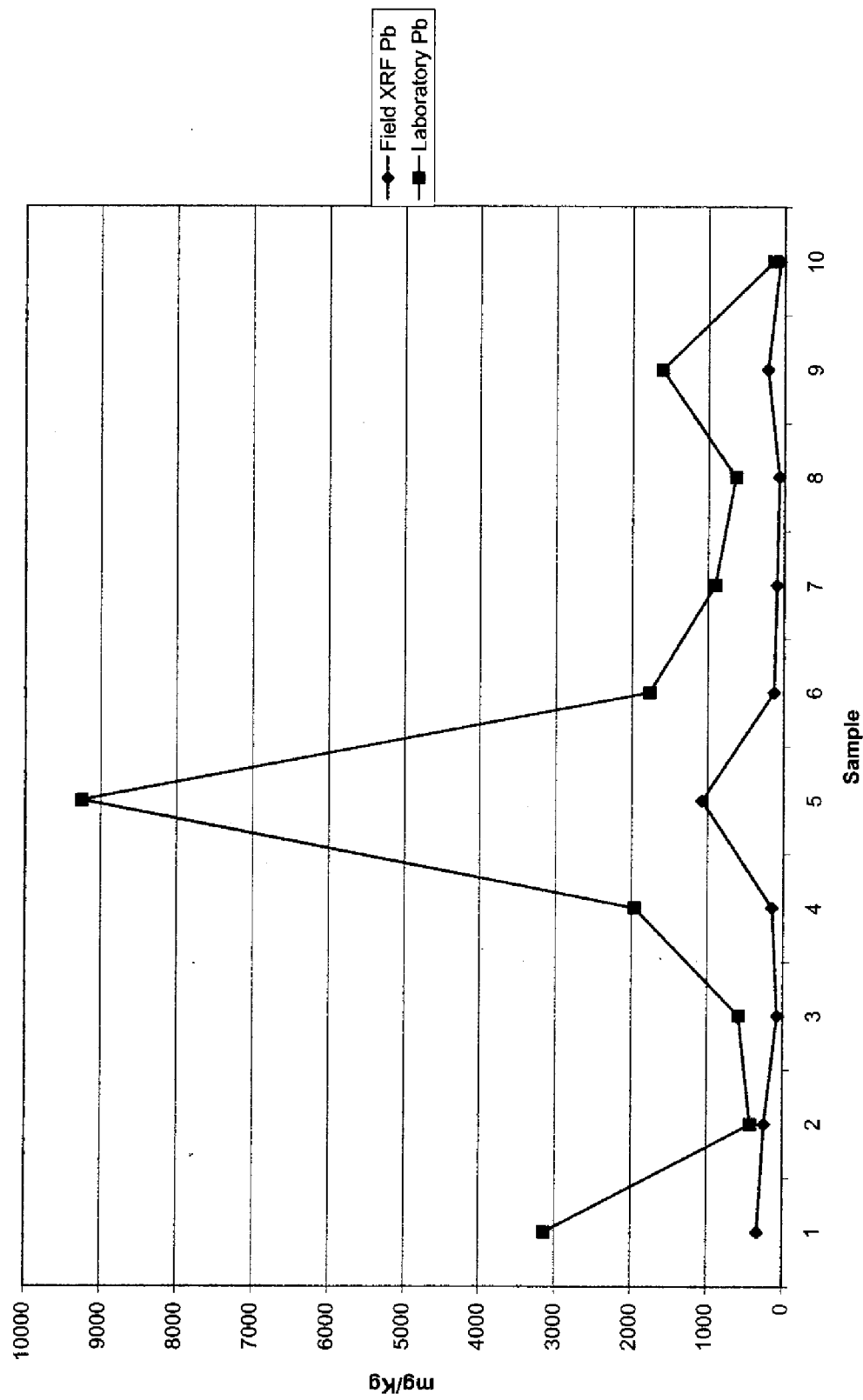
XRF to Lab With Trend Line



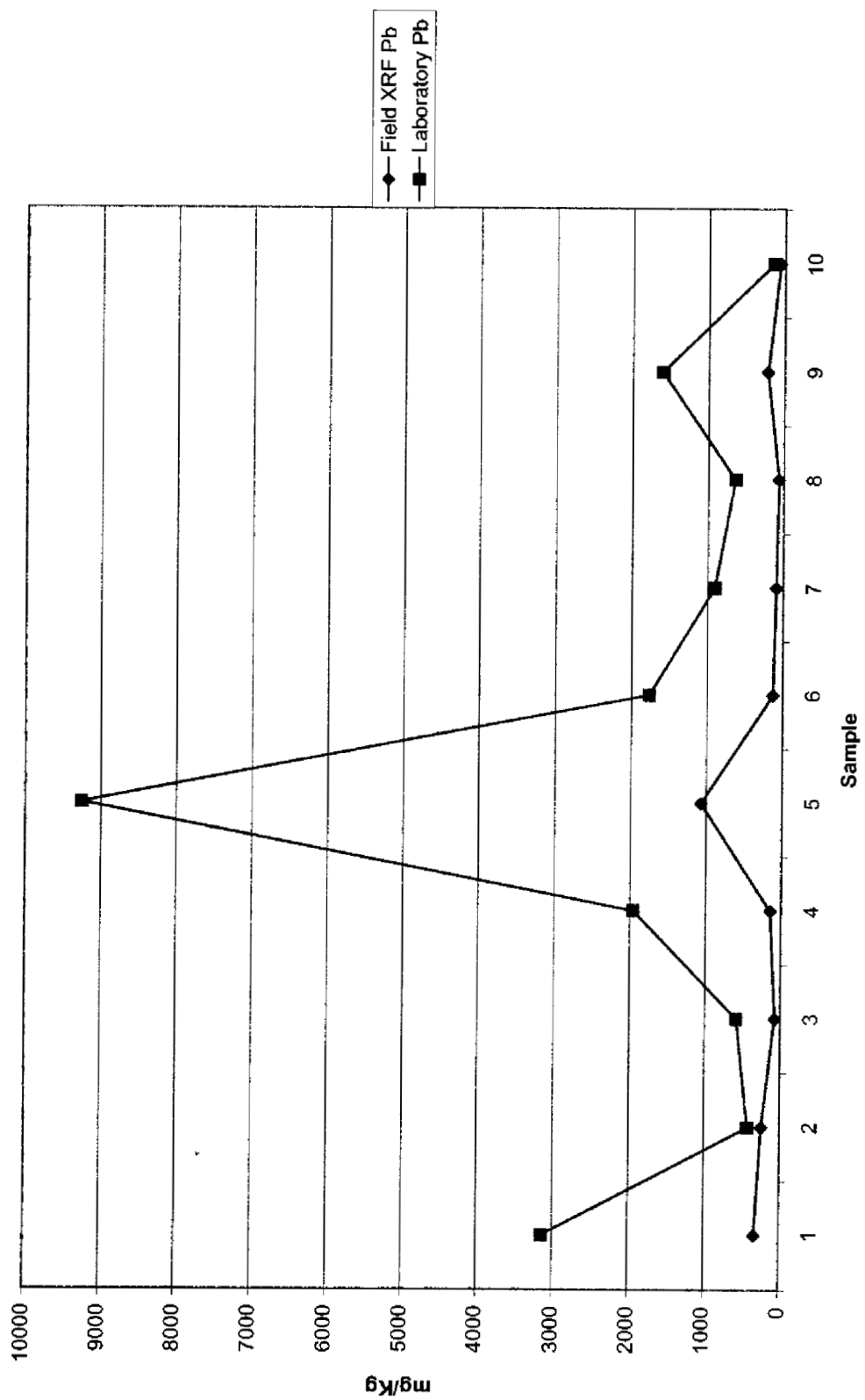
XRF to Lab With Trend Line



# XRF Corelation



# XRF Corelation





### 4.3 References

<sup>1</sup>DOE-ID, 1999, *Comprehensive Remedial Investigation/Feasibility Study for the Central Facilities Area Operable Unit 4-13 at the Idaho National Engineering and Environmental Laboratory*, Revision 0, DOE/ID-10680, Idaho National Engineering and Environmental Laboratory, Idaho Falls, Idaho, February.

<sup>2</sup>October Report

<sup>3</sup>Contract K00-583020, Task No. 28 -XRF Survey, Portage Environmental, Inc., subcontractor, Bechtel BWXT, Idaho, LLC, contractor, Idaho Falls, Idaho.

<sup>4</sup>Environmental Protection Agency, 1998, Method 6200, *Field Portable X-Ray Fluorescence Spectrometry for the Determination of Elemental Concentrations in Soil and Sediment*, May 1.

<sup>5</sup>Niton Corporation, 1997, *Niton Corporation XL-309 and 700 Series User's Guide*, Version 5.0 Chapter 4, "Analyzing Thin Samples," Niton Corporation,.

<sup>6</sup>Department of Energy Idaho Operations Office, 2001, *Field Sampling Plan for the Idaho National Engineering and Environmental Laboratory Central Facilities Area, Operable Unit 4-13, Transformer Yard CFA-10.*"), DOE/ID10857, Revision 0, March.

<sup>7</sup>40 CFR Part 745, 2001, Lead; "Identification of Dangerous Levels of Lead, Environmental Protection Agency," final rule (66 FR 1205-1240), *Federal Register Online* <http://www.epa.gov/fedrgstr/>, January 5.

431.02  
12/18/2000  
Rev. 08

**ENGINEERING DESIGN FILE**  
**Appendix A—XRF Survey Data**

Functional File No. \_\_\_\_\_  
EDF No. EDF-ER-307 \_\_\_\_\_  
Appendix A page A-1

**XRF Survey Data**

BULK

Header:

Table 1- Dust wipes of Roof and Building Interior

No	XLNo	Site	Insp	Type	Note	Ssec	Date/Time	Pb	Pb Error
1	1	1	Clements	Dust Wipe	On Cal	53.8	4/4/2001 8:55	NA	
6	6	E-1a	Clements	Dust Wipe	8 ft at eve	21.6	4/4/2001 9:14	<LOD	17.55
7	7	E-1b	Clements	Dust Wipe		21.6	4/4/2001 9:16	<LOD	16.95
8	8	E-1c	Clements	Dust Wipe		28	4/4/2001 9:18	<LOD	15.15
9	9	E-1d	Clements	Dust Wipe		21.3	4/4/2001 9:20	<LOD	15
10	10	E-2a	Clements	Dust Wipe	15 ft at eve	11	4/4/2001 9:22	<LOD	29.55
11	11	E-2b	Clements	Dust Wipe		19.5	4/4/2001 9:24	<LOD	20.1
12	12	E-2c	Clements	Dust Wipe		21.6	4/4/2001 9:25	<LOD	18.15
13	13	E-2d	Clements	Dust Wipe		21.3	4/4/2001 9:27	<LOD	16.35
18	18	E-3a	Clements	Dust Wipe	28 ft at eve	21.1	4/4/2001 9:37	<LOD	14.4
19	19	E-3b	Clements	Dust Wipe		19	4/4/2001 9:38	<LOD	14.7
20	20	E-3c	Clements	Dust Wipe		21.2	4/4/2001 9:40	<LOD	15.3
21	21	E-3d	Clements	Dust Wipe		21	4/4/2001 9:41	<LOD	14.7
22	22	E-4a	Clements	Dust Wipe	35 ft at eve	14.6	4/4/2001 9:43	<LOD	16.35
23	23	E-4b	Clements	Dust Wipe		19.2	4/4/2001 9:44	<LOD	17.55
24	24	E-4c	Clements	Dust Wipe		21.2	4/4/2001 9:46	<LOD	15.45
25	25	E-4d	Clements	Dust Wipe		20.5	4/4/2001 9:48	<LOD	13.95
26	26	E-5a	Clements	Dust Wipe	rain gutter	21.3	4/4/2001 9:50	<LOD	17.4
27	27	E-5b	Clements	Dust Wipe		21.1	4/4/2001 9:51	<LOD	15.3
28	28	E-5c	Clements	Dust Wipe		21.1	4/4/2001 9:53	21.6	11.5
29	29	E-5d	Clements	Dust Wipe		20.9	4/4/2001 9:55	<LOD	16.2
30	30	E-6a	Clements	Dust Wipe	rain gutter	21.1	4/4/2001 9:57	<LOD	14.4
31	31	E-6b	Clements	Dust Wipe		21.3	4/4/2001 9:59	<LOD	16.65
32	32	E-6c	Clements	Dust Wipe		14.8	4/4/2001 10:00	<LOD	18.75
33	33	E-6d	Clements	Dust Wipe		10.7	4/4/2001 10:01	<LOD	21.9
34	34	E-7a	Clements	Dust Wipe	64 ft at eve	21.3	4/4/2001 10:05	<LOD	14.55
35	35	E-7b	Clements	Dust Wipe		2.1	4/4/2001 10:06	<LOD	46.5
36	36	E-7b'	Clements	Dust Wipe		21	4/4/2001 10:07	<LOD	14.55
37	37	E-7c	Clements	Dust Wipe		21.3	4/4/2001 10:08	<LOD	15
38	38	E-7d	Clements	Dust Wipe		18.5	4/4/2001 10:10	<LOD	13.35
39	39	E-8a	Clements	Dust Wipe	72 at eve	21.2	4/4/2001 10:13	<LOD	15

40	40 E-8b	Clements	Dust Wipe	21.1	4/4/2001 10:15 <LOD	15.45
41	41 E-8c	Clements	Dust Wipe	21	4/4/2001 10:16 <LOD	15.9
42	42 E-8d	Clements	Dust Wipe	21.2	4/4/2001 10:18 <LOD	16.2
43	43 E-9a	Clements	Dust Wipe 84 ft at eve	21	4/4/2001 10:20 <LOD	13.35
44	44 E-9b	Clements	Dust Wipe	20.9	4/4/2001 10:22 <LOD	13.95
45	45 E-9c	Clements	Dust Wipe	20.9	4/4/2001 10:23 <LOD	14.85
46	46 E-9d	Clements	Dust Wipe 98 in rain	20.9	4/4/2001 10:25 <LOD	13.95
47	47 E-10a	Clements	Dust Wipe gutter	2.1	4/4/2001 10:27 <LOD	44.7
48	48 E-10b	Clements	Dust Wipe	12.6	4/4/2001 10:27 <LOD	19.5
49	49 E-10c	Clements	Dust Wipe	21	4/4/2001 10:30	26.9
50	50 E-10d	Clements	Dust Wipe	21.1	4/4/2001 10:31	17

55	55 W-1a	Clements	Dust Wipe 1ft at eve	10.6	4/4/2001 10:47 <LOD	22.35
56	56 W-1b	Clements	Dust Wipe	10.6	4/4/2001 10:48 <LOD	22.35
57	57 W-1c	Clements	Dust Wipe	10.6	4/4/2001 10:49 <LOD	20.1
58	58 W-1d	Clements	Dust Wipe	12.5	4/4/2001 10:50 <LOD	18.6
59	59 W-2a	Clements	Dust Wipe 17ft at eve	10.6	4/4/2001 10:51 <LOD	20.7
60	60 W-2b	Clements	Dust Wipe	14.9	4/4/2001 10:52 <LOD	18.6
61	61 W-2c	Clements	Dust Wipe	10.4	4/4/2001 10:53 <LOD	19.5
62	62 W-2d	Clements	Dust Wipe	4.3	4/4/2001 10:54 <LOD	39
63	63 W-3a	Clements	Dust Wipe 26 ft at eve	2.2	4/4/2001 10:58 <LOD	33.9
64	64 W-3a'	Clements	Dust Wipe	10.6	4/4/2001 10:58 <LOD	20.1
65	65 W-3b	Clements	Dust Wipe	10.6	4/4/2001 10:59 <LOD	24.15
66	66 W-3c	Clements	Dust Wipe	10.6	4/4/2001 11:00 <LOD	22.05
67	67 W-3d	Clements	Dust Wipe	10.6	4/4/2001 11:00 <LOD	19.95
68	68 W-4a	Clements	Dust Wipe 30 ft at eve	10.3	4/4/2001 11:03 <LOD	20.7
69	69 W-4b	Clements	Dust Wipe	10.4	4/4/2001 11:04 <LOD	18.3
70	70 W-4c	Clements	Dust Wipe	10.6	4/4/2001 11:05 <LOD	21.6
71	70 W-4d	Clements	Dust Wipe	10.6	4/4/2001 11:06 <LOD	21.6
72	72 W-5a	Clements	Dust Wipe 50 ft at eve	10.5	4/4/2001 11:06 <LOD	21.45
73	73 W-5a'	Clements	Dust Wipe	10.5	4/4/2001 11:07 <LOD	21.75
74	74 W-5b	Clements	Dust Wipe	10.4	4/4/2001 11:08 <LOD	18.9
75	75 W-5c	Clements	Dust Wipe	12.5	4/4/2001 11:09 <LOD	18.15

76	76 W-5d	Clements	Dust Wipe	10.3	4/4/2001 11:10	24	14.7
77	77 W-6a	Clements	Dust Wipe 62 ft at eve	17.1	4/4/2001 11:12 <LOD		17.55
78	78 W-6b	Clements	Dust Wipe	10.7	4/4/2001 11:13 <LOD		22.05
79	79 W-6c	Clements	Dust Wipe	10.7	4/4/2001 11:14 <LOD		19.5
80	80 W-6d	Clements	Dust Wipe	14.9	4/4/2001 11:15 <LOD		17.7
81	81 W-7a	Clements	Dust Wipe 78 ft at eve	10.4	4/4/2001 11:17 <LOD		20.55
82	82 W-7b	Clements	Dust Wipe	10.5	4/4/2001 11:18 <LOD		18.75
83	83 W-7c	Clements	Dust Wipe	12.5	4/4/2001 11:19 <LOD		19.05
84	84 W-7d	Clements	Dust Wipe	10.3	4/4/2001 11:20 <LOD		18.75
85	85 W-8a	Clements	Dust Wipe 82 ft at eve	12.8	4/4/2001 11:22 <LOD		22.35
86	86 W-8b	Clements	Dust Wipe	10.6	4/4/2001 11:23 <LOD		22.35
87	87 W-8c	Clements	Dust Wipe	10.5	4/4/2001 11:23 <LOD		18.3
88	88 W-8d	Clements	Dust Wipe	10.3	4/4/2001 11:24 <LOD		20.55
89	89 W-9a	Clements	Dust Wipe 90 ft at eve	10.6	4/4/2001 11:32 <LOD		19.65
90	90 Ww-9b	Clements	Dust Wipe	10.8	4/4/2001 11:33 <LOD		23.4
91	91 W-9c	Clements	Dust Wipe	15	4/4/2001 11:35 <LOD		20.55
92	92 W-9d	Clements	Dust Wipe	14.5	4/4/2001 11:36 <LOD		15.9
93	93 W-10a	Clements	Dust Wipe 100 ft at eve	10.5	4/4/2001 11:37 <LOD		21.75
94	94 W-10b	Clements	Dust Wipe	10.8	4/4/2001 11:38 <LOD		23.85
95	95 W-10c	Clements	Dust Wipe	14.5	4/4/2001 11:39 <LOD		15.75
96	96 W-10d	Clements	Dust Wipe	8.3	4/4/2001 11:40 <LOD		22.8
97	97 I-1a	Clements	Dust Wipe SE- wall 5' x6'	10.7	4/4/2001 11:43	156	37.1
98	98 I-1b	Clements	Dust Wipe	10.7	4/4/2001 11:44	91.8	27.4
99	99 I-1c	Clements	Dust Wipe	10.5	4/4/2001 11:45	63.1	23.2
100	100 I-1d	Clements	Dust Wipe	10.3	4/4/2001 11:46	74.5	24.3
101	101 I-2a	Clements	Dust Wipe 20'x6'	10.5	4/4/2001 11:48	194.5	37.1
102	102 I-2b	Clements	Dust Wipe	10.7	4/4/2001 11:49	210.4	42.1
103	103 I-2c	Clements	Dust Wipe	12.7	4/4/2001 11:50	98.3	25.5
104	104 I-2d	Clements	Dust Wipe	6.3	4/4/2001 11:51	113.6	38.9
105	105 I-3a	Clements	Dust Wipe SW corner 5'	14.7	4/4/2001 11:52	58	17.8
106	106 I-3b	Clements	Dust Wipe	10.5	4/4/2001 11:53	112.1	27.3
107	107 I-3c	Clements	Dust Wipe	10.4	4/4/2001 11:54	112.8	28.4
108	108 I-3d	Clements	Dust Wipe	12.3	4/4/2001 11:55	78.9	21.1
109	109 I-4a	Clements	Dust Wipe door	10.6	4/4/2001 11:57	59.4	22.6

110	110 I-4b	Clements	Dust Wipe	10.6	4/4/2001 11:58	69.1	24.5
111	111 I-4c	Clements	Dust Wipe	12.7	4/4/2001 11:59	121.8	29.4
112	112 I-4d	Clements	Dust Wipe	10.3	4/4/2001 12:00	107.1	27
			W Wall 35X				
113	113 I-5a	Clements	Dust Wipe 7'	10.6	4/4/2001 12:01	36.3	19.2
114	114 I-5b	Clements	Dust Wipe	10.6	4/4/2001 12:02	43.2	19.5
115	115 I-5c	Clements	Dust Wipe	10.7	4/4/2001 12:03	61.5	23.7
116	116 I-5d	Clements	Dust Wipe	12.6	4/4/2001 12:04	56	20
			W Wall above				
117	117 I-6a	Clements	Dust Wipe rigging'	10.5	4/4/2001 12:07	39.7	18.2
118	118 I-6b	Clements	Dust Wipe	10.6	4/4/2001 12:08	28.5	17.7
119	119 I-6c	Clements	Dust Wipe	10.6	4/4/2001 12:08	34.4	19.3
120	120 I-6d	Clements	Dust Wipe	12.9	4/4/2001 12:09 <LOD		22.2
			Abv NW walk				
121	121 I-7a	Clements	Dust Wipe door	10.6	4/4/2001 12:11	100.1	27.5
122	122 I-7b	Clements	Dust Wipe	10.6	4/4/2001 12:12	82.2	26.8
123	123 I-7c	Clements	Dust Wipe	10.6	4/4/2001 12:13	103.7	28.5
124	124 I-7d	Clements	Dust Wipe	10.4	4/4/2001 12:14	102.7	30.5
			NW by truck				
125	125 I-8a	Clements	Dust Wipe door	12.6	4/4/2001 12:15	81.6	22
126	126 I-8b	Clements	Dust Wipe	10.4	4/4/2001 12:16	258.6	41.8
127	127 I-8c	Clements	Dust Wipe	12.5	4/4/2001 12:17	311.8	45.1
128	128 I-8d	Clements	Dust Wipe	10.3	4/4/2001 12:18	366.8	56
			E Wall by				
2	2 I-9a	Clements	Dust Wipe crossbrace	20.8	4/4/2001 8:57	115	21.5
3	3 I-9b	Clements	Dust Wipe	24.8	4/4/2001 8:59	284.2	30.4
4	4 I-9c	Clements	Dust Wipe	20.5	4/4/2001 9:00	598.4	56.6
5	5 I-9d	Clements	Dust Wipe	20.5	4/4/2001 9:01	574.4	53.2
			E wall at curb				
129	129 I-10a	Clements	Dust Wipe	10.4	4/4/2001 12:20	251.4	41.1
130	130 I-10b	Clements	Dust Wipe	12.6	4/4/2001 12:20	246.2	39.3
131	131 I-10c	Clements	Dust Wipe	14.6	4/4/2001 12:21	159.8	28.1
132	132 I-10d	Clements	Dust Wipe	10.5	4/4/2001 12:22	128.6	31.5

14	14	Standard	Clements	Dust Wipe	Standard 1	21	4/4/2001 9:29	29.1	12.3
15	15	Standard	Clements	Dust Wipe		21.1	4/4/2001 9:31	26.7	12.4
16	16	Standard	Clements	Dust Wipe		21	4/4/2001 9:32 <LOD		14.7
17	17	Standard	Clements	Dust Wipe		21.1	4/4/2001 9:34 <LOD		14.1
51	51	Standard	Clements	Dust Wipe	Standard 2	21.1	4/4/2001 10:40 <LOD		16.5
52	52	Standard	Clements	Dust Wipe		21.1	4/4/2001 10:42	19.6	11.8
53	53	Standard	Clements	Dust Wipe		20.9	4/4/2001 10:43 <LOD		15.9
54	54	Standard	Clements	Dust Wipe		20.6	4/4/2001 10:45 <LOD		12.9
133	133	Standard	Clements	Dust Wipe	Standard 3	20.9	4/4/2001 12:24 <LOD		15.45
134	134	Standard	Clements	Dust Wipe "		20.9	4/4/2001 12:25	29.7	12.2
135	135	Standard	Clements	Dust Wipe "		20.7	4/4/2001 12:27 <LOD		13.8
136	136	Standard	Clements	Dust Wipe "		20.8	4/4/2001 12:28 <LOD		14.4
137	137	Standard	Clements	Dust Wipe	Standard 4	21	4/4/2001 12:30	53.3	15.9
138	138	Standard	Clements	Dust Wipe "		21.1	4/4/2001 12:31	45.9	15.6
139	139	Standard	Clements	Dust Wipe "		21	4/4/2001 12:33	26.3	13.2
140	140	Standard	Clements	Dust Wipe "		21.3	4/4/2001 12:34	22.8	12.5
141	141	Standard	Clements	Dust Wipe	Standard 5	21.1	4/4/2001 12:36	19.9	11.5
142	142	Standard	Clements	Dust Wipe "		20.9	4/4/2001 12:37	79.3	17.3
143	143	Standard	Clements	Dust Wipe "		21.1	4/4/2001 12:39	59.9	16
144	144	Standard	Clements	Dust Wipe "		25.9	4/4/2001 12:40	29.5	12.7

A	B	C	D	E	F	G	H	I	J	K	L	M
1	Table 2 --Pre-remediation Sampling - XRF Survey Results											
2	Site: Building 667 Transformer Yard											
3	No	XLNo	Site	Insp	Type	Note	Ssec	Date/Time	Pb	Pb Error	Field /Lab Ratio	TCLP
4	4	4	Area 1	Clements	BULK SOIL	Bag 1 3"	12.6	4/9/2001 13:12	254.4	43.9		
5	7	7	Area 1	Clements	BULK SOIL	Bag 2 3"	16.9	4/9/2001 13:16	166.1	33.6		
6	5	5	Area 1	Clements	BULK SOIL	Bag 3 12"	14.8	4/9/2001 13:13	48.8	26.2		
7	6	6	Area 1	Clements	BULK SOIL	Bag 4 12"	14.9	4/9/2001 13:15	38.4	24.9		
8	2	2	Area 1	Clements	BULK SOIL	12"clouds	20.9	4/9/2001 13:03	<LOD	32.4		
9	50	50	Area 1	Clements	BULK SOIL	Surface(n)	6.5	4/10/2001 11:34	231	67.5		
10	51	51	Area 1	Clements	BULK SOIL	Surface(n)	6.5	4/10/2001 11:34	199	65.7		
11	52	52	Area 1	Clements	BULK SOIL	Surface(m)	6.5	4/10/2001 11:35	171.8	60.6		
12	53	53	Area 1	Clements	BULK SOIL	Surface(m)	6.5	4/10/2001 11:36	130.9	58.4		
13	54	54	Area 1	Clements	BULK SOIL	Surface(s)	6.4	4/10/2001 11:37	<LOD	68.85		
14	55	55	Area 1	Clements	BULK SOIL	Surface(s)	8.6	4/10/2001 11:37	136.5	48.4		
15	97	97	Area 1	Clements	BULK SOIL	1 bag 0-6"	21.1	4/10/2001 13:53	145	29.4		
16	98	98	Area 1	Clements	BULK SOIL	2 bag 0-6"	21.3	4/10/2001 13:55	166.9	31.1		
17	99	99	Area 1	Clements	BULK SOIL	3 bag 0-6"	21.4	4/10/2001 13:56	145.9	31.4		
18	125	125	Area 1	Clements	BULK SOIL	250um 6"	19.3	4/11/2001 9:49	327	46.2		
19	126	126	Area 1	Clements	BULK SOIL	200um 6"	21.1	4/11/2001 9:50	185	32.9		
20	Lab Sample Zone 1 0-6"											
21	131	131	Area 1	Clements	BULK SOIL	1 bag 0-3"	10.6	4/11/2001 10:29	214.8	47.7		
22	132	132	Area 1	Clements	BULK SOIL	2 bag 0-3"	14.9	4/11/2001 10:30	226.2	40.4		
23	133	133	Area 1	Clements	BULK SOIL	3 bag 0-3"	6.4	4/11/2001 10:31	259.6	63.8		
24	134	134	Area 1	Clements	BULK SOIL	1 bag 12"	12.8	4/11/2001 10:34	<LOD	41.1		
25	135	135	Area 1	Clements	BULK SOIL	2 bag 12"	19.1	4/11/2001 10:35	<LOD	35.85		
26	136	136	Area 1	Clements	BULK SOIL	3 bag 12"	6.4	4/11/2001 10:37	<LOD	57.45		
27	189	189	Area 1	Clements	BULK SOIL	250 um 3"	12.8	4/11/2001 15:33	302.6	53.7		
28	190	190	Area 1	Clements	BULK SOIL	250 um 12"	10.8	4/11/2001 15:34	<LOD	56.1		
29	Lab sample Zone 12' to 15"											
30									386		0.145336788	6.88057041
31	8	8	Area 2	Clements	BULK SOIL	Bag 5 3"						
32	9	9	Area 2	Clements	BULK SOIL	Bag 6 12"	19	4/9/2001 13:22	123.6	30.8		
33	44	44	Area 2	Clements	BULK SOIL	Surface(e)	14.6	4/9/2001 13:39	<LOD	38.4		
34	45	45	Area 2	Clements	BULK SOIL	Surface(e)	6.5	4/10/2001 11:24	238	67.6		
35	46	46	Area 2	Clements	BULK SOIL	Surface(m)	6.4	4/10/2001 11:25	586.4	94.9		
36	47	47	Area 2	Clements	BULK SOIL	Surface(m)	6.4	4/10/2001 11:26	374.8	76		
37	48	48	Area 2	Clements	BULK SOIL	Surface(w)	6.5	4/10/2001 11:26	196.3	63.8		
38	49	49	Area 2	Clements	BULK SOIL	Surface(w)	6.5	4/10/2001 11:27	82.6	49.4		
39	103	103	Area 2	Clements	BULK SOIL	1 bag 0-6"	6.5	4/10/2001 11:28	87.4	52.8		
							21.3	4/10/2001 14:03	132.8	29.7		



A	B	C	D	E	F	G	H	I	J	K	L	M
1	Table 2 --Pre-remediation Sampling - XRF Survey Results											
2	Site: Building 667 Transformer Yard											
No	XL No	Site	Insp	Type	Note	Ssec	Date/Time	Pb	Pb Error	Field /Lab Ratio	Lab to Field Ratio	TCLP
40	104	104 Area 2	Clements	BULK SOIL	2 bag 0-6"	21.5	4/10/2001 14:04	137.1	30.3			
41	105	105 Area 2	Clements	BULK SOIL	3 bag 0-6"	23.5	4/10/2001 14:06	172	30			
42	127	127 Area 2	Clements	BULK SOIL	250um 6"	21.3	4/11/2001 10:00	233.8	35.7			
43	128	128 Area 2	Clements	BULK SOIL	200mm 6"	21.2	4/11/2001 10:05	241.8	34.9			
44	Lab Sample Zone 2 0-6"											
45	137	137 Area 2	Clements	BULK SOIL	1 bag 0-3"	10.7	4/11/2001 10:38	427	43.4	0.566276347	1.76592225	317
46	138	138 Area 2	Clements	BULK SOIL	2 bag 0-3"	10.7	4/11/2001 10:38	154.8	44			
47	139	139 Area 2	Clements	BULK SOIL	3 bag 0-3"	10.7	4/11/2001 10:39	134.2	42.2			
48	140	140 Area 2	Clements	BULK SOIL	1 bag 12"	12.8	4/11/2001 10:40	<LOD	38.4			
49	141	141 Area 2	Clements	BULK SOIL	2 bag 12"	10.8	4/11/2001 10:41	<LOD	47.85			
50	142	142 Area 2	Clements	BULK SOIL	3 bag 12"	10.7	4/11/2001 10:42	<LOD	44.85			
51	191	191 Area 2	Clements	BULK SOIL	250 um 3"	10.7	4/11/2001 15:35	266.8	55.2			
52	192	192 Area 2	Clements	BULK SOIL	250 um 12"	12.8	4/11/2001 15:36	<LOD	46.5			
53	Lab sample Zone 2 12' to 15"											
54	10	10 Area 3	Clements	BULK SOIL	Bag 7-3"	21.1	4/9/2001 14:00	71.9	23.7			
56	32	32 Area 3	Clements	BULK SOIL	Surface(n)	6.6	4/10/2001 11:16	<LOD	76.5			
57	33	33 Area 3	Clements	BULK SOIL	Surface(n)	6.5	4/10/2001 11:16	83.2	51.6			
58	34	34 Area 3	Clements	BULK SOIL	Surface(m)	6.6	4/10/2001 11:17	<LOD	76.8			
59	35	35 Area 3	Clements	BULK SOIL	Surface(m)	6.6	4/10/2001 11:18	<LOD	71.25			
60	36	36 Area 3	Clements	BULK SOIL	Surface(s)	6.5	4/10/2001 11:18	137.7	56.6			
61	37	37 Area 3	Clements	BULK SOIL	Surface(s)	6.5	4/10/2001 11:19	91.7	51.4			
62	94	94 Area 3	Clements	BULK SOIL	1 bag 0-6"	16.9	4/10/2001 13:48	46.1	26			
63	95	95 Area 3	Clements	BULK SOIL	2 bag 0-6"	21.3	4/10/2001 13:50	<LOD	33.75			
64	96	96 Area 3	Clements	BULK SOIL	3 bag 0-6"	21.3	4/10/2001 13:52	<LOD	32.85			
65	129	129 Area 3	Clements	BULK SOIL	250 um 6"	23.3	4/11/2001 10:18	74.5	26.7			
66	130	130 Area 3	Clements	BULK SOIL	200 mm 6"	21.5	4/11/2001 10:20	<LOD	38.4			
67	Lab Sample Zone 3 0-6"											
68	143	143 Area 3	Clements	BULK SOIL	1 bag 0-3"	10.7	4/11/2001 10:43	583	37.2	0.127787307	7.825503356	8.2
69	144	144 Area 3	Clements	BULK SOIL	2 bag 0-3"	10.7	4/11/2001 10:44	81.8	135			
70	145	145 Area 3	Clements	BULK SOIL	3 bag 0-3"	6.4	4/11/2001 10:45	<LOD	41.8			
71	193	193 Area 3	Clements	BULK SOIL	250 um 3"	10.7	4/11/2001 15:37	136.5	70.2			
72									45			
73												

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Table 2 --Pre-remediation Sampling - XRF Survey Results												
2	Site: Building 667 Transformer Yard												
3	No	XLNo	Site	Insp	Type	Note	Ssec	Date/Time	Pb	Pb Error	Field /Lab Ratio	Lab to Field Ratio	TCLP
74	11	11	Area 4	Clements	BULK SOIL	Bag 8- 3"	21.1	4/9/2001 14:01	82.6	24.7			
75	38	38	Area 4	Clements	BULK SOIL	Surface(n)	6.5	4/10/2001 11:20	<LOD	75.75			
76	39	39	Area 4	Clements	BULK SOIL	Surface(n)	6.5	4/10/2001 11:21	<LOD	64.05			
77	40	40	Area 4	Clements	BULK SOIL	Surface(m)	6.5	4/10/2001 11:21	<LOD	61.65			
78	41	41	Area 4	Clements	BULK SOIL	Surface(m)	6.5	4/10/2001 11:22	<LOD	73.8			
79	42	42	Area 4	Clements	BULK SOIL	Surface(s)	6.4	4/10/2001 11:23	94	52.8			
80	43	43	Area 4	Clements	BULK SOIL	Surface(s)	6.5	4/10/2001 11:24	112.6	55.1			
81	106	106	Area 4	Clements	BULK SOIL	1 bag 0-6"	21.4	4/10/2001 14:08	108.4	28			
82	107	107	Area 4	Clements	BULK SOIL	2 bag 0-6"	21.3	4/10/2001 14:09	106.2	27.3			
83	108	108	Area 4	Clements	BULK SOIL	3 bag 0-6"	21.3	4/10/2001 14:10	81.8	25.7			
84	146	146	Area 4	Clements	BULK SOIL	1 bag 0-3"	12.9	4/11/2001 10:45	84.5	35.2			
85	147	147	Area 4	Clements	BULK SOIL	2 bag 0-3"	17.1	4/11/2001 10:46	87.1	30.2			
86	148	148	Area 4	Clements	BULK SOIL	3 bag 0-3"	10.7	4/11/2001 10:47	123.8	40.1			
87	174	174	Area 4	Clements	BULK SOIL	250um 6"	10.7	4/11/2001 11:48	145.1	44.6			
88	175	175	Area 4	Clements	BULK SOIL	200mm6"	12.8	4/11/2001 11:50	127.2	38.4			
89	Lab Sample Zone 4 0-6"								1960		0.074030612	13.50792557	36.3
90	194	194	Area 4	Clements	BULK SOIL	250 um 3"	10.6	4/11/2001 15:38	128.2	43.1			
91													
92	15	15	Area 5	Clements	BULK SOIL	Surface(s)	21.7	4/9/2001 14:59	510.8	53.2			
93	16	16	Area 5	Clements	BULK SOIL	Surface(s)	21.4	4/9/2001 15:01	487.6	50.8			
94	17	17	Area 5	Clements	BULK SOIL	Surface(s)	21.3	4/9/2001 15:03	646	56.4			
95	19	19	Area 5	Clements	BULK SOIL	Surface(m)	21.5	4/9/2001 15:11	960.8	81.7			
96	20	20	Area 5	Clements	BULK SOIL	Surface(m)	21.1	4/9/2001 15:12	1109.6	84.1			
97	21	21	Area 5	Clements	BULK SOIL	Surface(n)	10.6	4/9/2001 15:15	168	42.9			
98	22	22	Area 5	Clements	BULK SOIL	Surface(n)	15.3	4/9/2001 15:16	584.4	66.1			
99	23	23	Area 5	Clements	BULK SOIL	Surface(n)	10.7	4/9/2001 15:17	380.8	58.4			
100	25	25	Area 5	Clements	BULK SOIL	Bag 13-3"	21	4/9/2001 15:29	686.8	51.9			
101	56	56	Area 5	Clements	BULK SOIL	Surface(s)	6.4	4/10/2001 11:38	417.2	80.2			
102	57	57	Area 5	Clements	BULK SOIL	Surface(s)	6.5	4/10/2001 11:39	449.6	92.7			
103	58	58	Area 5	Clements	BULK SOIL	Surface(m)	6.4	4/10/2001 11:43	1420	170			
104	59	59	Area 5	Clements	BULK SOIL	Surface(m)	8.8	4/10/2001 11:44	1069.6	150			
105	84	84	Area 5	Clements	BULK SOIL	Surface(n)	6.5	4/10/2001 12:07	371.2	85			
106	85	85	Area 5	Clements	BULK SOIL	Surface(n)	6.5	4/10/2001 12:08	298.2	74			
107	109	109	Area 5	Clements	BULK SOIL	1 bag 0-6"	21.5	4/10/2001 14:17	524.4	50.7			
108	110	110	Area 5	Clements	BULK SOIL	2 bag 0-6"	27.9	4/10/2001 14:18	418.8	40.4			
109	111	111	Area 5	Clements	BULK SOIL	3 bag 0-6"	21.2	4/10/2001 14:20	439.6	44.3			
110	149	149	Area 5	Clements	BULK SOIL	1 bag 0-3"	10.6	4/11/2001 10:48	760.4	84.4			
111	150	150	Area 5	Clements	BULK SOIL	2 bag 0-3"	10.6	4/11/2001 10:49	738.4	81.7			

A	B	C	D	E	F	G	H	I	J	K	L	M
Table 2 - Pre-remediation Sampling - XRF Survey Results												
Site: Building 667 Transformer Yard												
No	XLNo	Site	Insp	Type	Note	Ssec	Date/Time	Pb	Pb Error	Field /Lab Ratio	Lab to Field Ratio	TCLP
112	151	151 Area 5	Clements	BULK SOIL	3 bag 0-3"	10.6	4/11/2001 10:50	1100	96.9			
113	152	152 Area 5	Clements	BULK SOIL	1 bag 12"	12.7	4/11/2001 10:51	107.2	35.5			
114	153	153 Area 5	Clements	BULK SOIL	2 bag 12"	10.6	4/11/2001 10:52	98.9	37.9			
115	154	154 Area 5	Clements	BULK SOIL	3 bag 12"	10.6	4/11/2001 10:53	98.5	38.5			
116	176	176 Area 5	Clements	BULK SOIL	250um 6"	14.8	4/11/2001 12:08	1069.6	90.5			
117	177	177 Area 5	Clements	BULK SOIL	200mm 6"	17	4/11/2001 12:10	535.2	56.9			
118	Lab Sample Zone 5 0-6"							9260		0.115507559	8.657442034	2810
119	195	195 Area 5	Clements	BULK SOIL	250 um 3"	10.6	4/11/2001 15:39	1389.6	120			
120	196	196 Area 5	Clements	BULK SOIL	250 um 12"	14.9	4/11/2001 15:40	226.8	44.3			
121	Lab sample Zone 5 12' to 15"							1540		0.147272727	6.790123457	126
122	181	18 Area 5	Clements	BULK SOIL	Surface(m)	21.4	4/9/2001 15:09	861.6	78.2			
123	26	26 Area 5	Clements	BULK SOIL	Bag 14- 3"	21.1	4/9/2001 15:32	588.8	49			
124	28	28 Area 5	Clements	BULK SOIL	Bag 15- 12"	21.2	4/9/2001 15:44	113.4	27.4			
125	29	29 Area 5	Clements	BULK SOIL	Bag 16 -12"	12.6	4/9/2001 16:00	<LOD	38.85			
126												
127	12	12 Area 6	Clements	BULK SOIL	Bag 9- 3"	21.3	4/9/2001 14:51	74.8	26.4			
128	13	13 Area 6	Clements	BULK SOIL	Bag 10-12"	21.2	4/9/2001 14:53	<LOD	29.7			
129	60	60 Area 6	Clements	BULK SOIL	Surface(w)	6.5	4/10/2001 11:45	243	74.6			
130	61	61 Area 6	Clements	BULK SOIL	Surface(w)	6.4	4/10/2001 11:46	1360	140			
131	62	62 Area 6	Clements	BULK SOIL	Surface(m)	6.5	4/10/2001 11:47	162	63			
132	63	63 Area 6	Clements	BULK SOIL	Surface(m)	6.4	4/10/2001 11:47	370.8	76.5			
133	64	64 Area 6	Clements	BULK SOIL	Surface(e)	6.5	4/10/2001 11:48	130.6	53.3			
134	65	65 Area 6	Clements	BULK SOIL	Surface(e)	6.5	4/10/2001 11:49	<LOD	65.1			
135	112	112 Area 6	Clements	BULK SOIL	1 bag 0-6"	23.4	4/10/2001 14:22	171.5	30.1			
136	113	113 Area 6	Clements	BULK SOIL	2 bag 0-6"	21.3	4/10/2001 14:23	70	26.4			
137	114	114 Area 6	Clements	BULK SOIL	3 bag 0-6"	21.5	4/10/2001 14:25	74.5	27.6			
138	155	155 Area 6	Clements	BULK SOIL	1 bag 0-3"	15	4/11/2001 10:54	54.6	31.7			
139	156	156 Area 6	Clements	BULK SOIL	2 bag 0-3"	10.8	4/11/2001 10:55	169.7	46.4			
140	157	157 Area 6	Clements	BULK SOIL	3 bag 0-3"	6.4	4/11/2001 10:56	109.5	53.2			
141	158	158 Area 6	Clements	BULK SOIL	1 bag 12"	14.9	4/11/2001 10:56	<LOD	35.55			
142	159	159 Area 6	Clements	BULK SOIL	2 bag 12"	10.8	4/11/2001 10:57	<LOD	49.5			
143	160	160 Area 6	Clements	BULK SOIL	3 bag 12"	10.6	4/11/2001 10:58	<LOD	46.65			
144	179	179 Area 6	Clements	BULK SOIL	250um 6"	10.7	4/11/2001 15:22	125.3	45.6			
145	180	180 Area 6	Clements	BULK SOIL	200mm6"	10.6	4/11/2001 15:23	<LOD	58.2			
146	Lab Sample Zone 6 0-6"							1770		0.07079096	14.12609737	936
147	197	197 Area 6	Clements	BULK SOIL	250 um 3"	10.8	4/11/2001 15:41	154.3	50.6			
148	198	198 Area 6	Clements	BULK SOIL	250 um 12"	10.7	4/11/2001 15:42	<LOD	49.5			
149	Lab Sample Zone 6 0-6"							184		0.269021739	3.717171717	1.8



A	B	C	D	E	F	G	H	I	J	K	L	M
1 Table 2 --Pre-remediation Sampling - XRF Survey Results												
2	Site: Building 667 Transformer Yard											
3	No	XLNo	Site	Insp	Type	Note	Ssec	Date/Time	Pb	Pb Error	Field /Lab Ratio	Lab to Field Ratio
188												
189	86	86	Area 9	Clements	BULK SOIL	Surface(n)	6.5	4/10/2001 12:09	115.4	52.8		
190	87	87	Area 9	Clements	BULK SOIL	Surface(n)	6.4	4/10/2001 12:10	234.4	62.4		
191	88	88	Area 9	Clements	BULK SOIL	Surface(m)	6.3	4/10/2001 12:10	255.4	59.5		
192	89	89	Area 9	Clements	BULK SOIL	Surface(m)	6.5	4/10/2001 12:11	255.4	70		
193	90	90	Area 9	Clements	BULK SOIL	Surface(s)	6.5	4/10/2001 12:12 <LOD		66.75		
194	91	91	Area 9	Clements	BULK SOIL	Surface(s)	6.5	4/10/2001 12:13 <LOD		67.8		
195	118	118	Area 9	Clements	BULK SOIL	1 bag 0-6"	21.3	4/10/2001 14:32	145.4	28.6		
196	119	119	Area 9	Clements	BULK SOIL	2 bag 0-6"	21.3	4/10/2001 14:33	178.5	30.9		
197	120	120	Area 9	Clements	BULK SOIL	3 bag 0-6"	21.2	4/10/2001 14:35	124.8	27.8		
198	167	167	Area 9	Clements	BULK SOIL	1 bag 0-3"	10.6	4/11/2001 11:05	159.2	42		
199	168	168	Area 9	Clements	BULK SOIL	2 bag 0-3"	10.7	4/11/2001 11:06	122.4	39.7		
200	169	169	Area 9	Clements	BULK SOIL	3 bag 0-3"	17	4/11/2001 11:06	131.1	31.1		
201	185	185	Area 9	Clements	BULK SOIL	250um 6"	10.6	4/11/2001 15:28	221.4	50.8		
202	186	186	Area 9	Clements	BULK SOIL	200mm 6"	10.6	4/11/2001 15:29	143.3	44.7		
203	Lab Sample Zone 9 0-6"											
204	201	201	Area 9	Clements	BULK SOIL	250 um 3"	15.1	4/11/2001 15:45	1610	45.3	0.137515528	7.271906052
205												
206												
207	78	78	Area 10	Clements	Concrete	Surface (e)	6.5	4/10/2001 11:59 <LOD		73.65		
208	121	121	Area 10	Clements	Concrete	1 bag 0-3"	21.6	4/10/2001 14:36 <LOD		33.75		
209	122	122	Area 10	Clements	Concrete	2 bag 0-3"	21.7	4/10/2001 14:38 <LOD		31.35		
210	123	123	Area 10	Clements	Concrete	3 bag 0-3"	21.6	4/10/2001 14:39 <LOD		32.4		
211	170	170	Area 10	Clements	Concrete	1 bag 0-3"	16.9	4/11/2001 11:08 <LOD		32.85		
212	171	171	Area 10	Clements	Concrete	2 bag 0-3"	10.5	4/11/2001 11:09 <LOD		41.55		
213	172	172	Area 10	Clements	Concrete	3 bag 0-3"	10.5	4/11/2001 11:09 <LOD		41.55		
214	187	187	Area 10	Clements	BULK SOIL	250 um 6"	10.9	4/11/2001 15:30 <LOD		59.1		
215	188	188	Area 10	Clements	BULK SOIL	200 mm 6"	10.9	4/11/2001 15:31 <LOD	143	50.4	0.413286713	2.41962775
216	Lab Sample Zone 10 0-6"											
217	202	202	Area 10	Clements	BULK SOIL	250 um 3"	12.7	4/11/2001 15:46 <LOD		45.45		3.4
218	79	79	Area 10	Clements	Concrete	Surface (e)	6.5	4/10/2001 11:59 <LOD		81.15		
219	80	80	Area 10	Clements	Concrete	Surface(m)	6.5	4/10/2001 12:00 <LOD		74.7		
220	81	81	Area 10	Clements	Concrete	Surface(m)	6.5	4/10/2001 12:00	101.8	59.9		
221	82	82	Area 10	Clements	Concrete	Surface(w)	6.5	4/10/2001 12:01 <LOD		83.55		
222	83	83	Area 10	Clements	Concrete	Surface(w)	6.6	4/10/2001 12:02 <LOD		78.3		
223												
224												

A	B	C	D	E	F	G	H	I	J	K	L	M
1	Table 2 --Pre-remediation Sampling - XRF Survey Results											
2	Site: Building 667 Transformer Yard											
3	No	XLNo	Site	Insp	Type	Note	Ssec	Date/Time	Pb	Pb Error	Field /Lab Ratio	Lab to Field Ratio
225												
226												
227	1	1	BLDG667	Clements	BULK SOIL	On Cal	49	4/9/2001 13:03	NA			
228	30	30	On Cal	Clements	BULK SOIL	On Cal	49	4/10/2001 11:05	NA			
229	93	93	On Cal	Clements	BULK SOIL	On cal	49	4/10/2001 13:47	NA			
230	124	124	On Cal	Clements	BULK SOIL	On cal	49	4/11/2001 9:46	NA			
231	178	178	On Cal	Clements	BULK SOIL	On cal	51.4	4/11/2001 15:16	NA			
232	3	3	Resl	Clements	BULK SOIL	standard	21.3	4/9/2001 13:06	262.4	36.8		
233	24	24	RESL	Clements	BULK SOIL	standard	21.3	4/9/2001 15:22	266.8	36.5		
234	31	31	RESL	Clements	BULK SOIL	Standard	17.1	4/10/2001 11:14	258	41.5		
235	173	173	RESL	Clements	BULK SOIL	Standard	21.3	4/11/2001 11:46	247.8	36.2		
236	203	203	RESL	Clements	BULK SOIL	Standard	21.4	4/11/2001 15:47	236.2	35.5		
237	92	92	RESL	Clements	BULK SOIL	Standard	21.3	4/10/2001 12:15	247.6	36.8		

Correlation of Lab and Field Results  
XRF CFA-08 Transformer Yard

Area #	Field Reading	Lab Results	Field/Lab %	Lab Ratio
1 at 6"	327	3140	10.4%	9.6
2 at 6"	241.8	427	56.6%	1.8
3 at 6"	74.5	583	12.8%	7.8
4 at 6"	145.1	1960	7.4%	13.5
5 at 6"	1069.6	9260	11.6%	8.7
6 at 6"	125.3	1770	7.1%	14.1
7 at 6"	92.9	907	10.2%	9.8
8 at 6"	66.7	639	10.4%	9.6
9 at 6"	221.4	1610	13.8%	7.3
10 at 6"	59.1	143	41.3%	2.4
Range of correlation			7 - 56.6 %	1.8 to 14.1
Average			18.2%	8.5
Mode	9.6			
Median	7.95			
1 at 12" + or -	56.1	386	14.5%	6.9
2 at 12" + or -	46.5	170	27.4%	3.7
5 at 12"	226.8	1540	14.7%	6.8
6 at 12" +or-	49.5	184	26.9%	3.7
Range of correlation			14.5 - 27.4%	3.7- 6.9
Average			20.9%	5.3
Mode	3.7			
Median	5.3			